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USEPA (Environmental Protection Agency) Method Study 36 SW-846 Methods 8270/3510, GC/MS (Gas Chromatography/Mass Spectrometry) Method for Semivolatile Organics: Capillary Column Technique Separatory Funnel Liquid-Liquid Extraction

Bionetics Corp., Cincinnati, OH

Prepared for:

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16. ABSTRACT

An interlaboratory collaborative study was conducted to determine the precision and bias (recovery) of Office of Solid Waste (OSW) Methods 8270/3510 for the analysis of 59 semivolatile organic compounds in groundwater. OSW Method 8270 is entitled, "GC/MS Method for Semivolatile Organics Capillary Column Technique: and includes instructions for quality control, sample preparation and analysis of samples by GC/MS. OSW Method 3510 is entitled, "Separatory Funnel Liquid-Liquid Extraction".

The study design was based upon Youden's non-replicate plan for collaborative tests of analytical methods. Each water type was spiked with three Youden sample pairs of the 59 semivolatile compounds and analyzed using Methods 8270/3510. The test waters included reagent water, as a "control" against which other test data were compared, and two types of groundwater. The resulting data were analyzed using the USEPA computer program entilted, "Interlaboratory Method Validation Study (IMVS)". The data analyses produced measures of precision and recovery for each compound in each water type and compared the performance of the method between water types.

The study was conducted under the auspices of the U.S. Environmental Protection Agency, Quality Assurance Branch, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio under EPA Contract No. 68-03-3254. This report covers a period of time from September 10, 1986 to December 21, 1987. Analytical work was completed as of September, 1987.

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USEPA METHOD STUDY 36
SW-846 METHODS 8270/3510
GC/MS METHOD FOR SEMIVOLATILE ORGANICS: CAPILLARY COLUMN TECHNIQUE; SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION

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FOREWORD

Environmental measurements are required to determine the quality of ambient waters and the character of wastes and wastewater effluents. The Environmental Monitoring Systems Laboratory (EMSL)-Cincinnati, conducts research to:

Develop and evaluate techniques to measure the presence and concentration of physical, chemical, and radiological pollutants in water, wastewater, bottom sediments, and solid waste.

Investigate methods for the concentration, recovery, and identification of viruses, bacteria, and other microorganisms in water.

Determine the response of aquatic organisms to water quality.

Support an Agency-wide quality assurance program to assure standardization and quality control of systems for monitoring water and wastes.

This publication of EMSL-Cincinnati, entitled EPA Method Study 36, SW-846 Method 8270/3510, GC/MS Method for Semivolatile Organics: Capillary Column Technique; Separatory Funnel Liquid-Liquid Extraction, reports the results of EPA's interlaboratory method study for the analyses of 59 semivolatile organic compounds in reagent water, ground water and leachate matrices.

Federal agencies, states, municipalities, universities, private laboratories, and industry should find this evaluative study of assistance in monitoring and controlling pollution in the environment.

Thomas A. Clark, Director
EMSL-Cincinnati
December 1988

ABSTRACT

An interlaboratory collaborative study was conducted on SW-846 Methods 8270/3510 entitled "GC/MS Method for Semivolatile Organics: Capillary Column Technique; Separatory Funnel Liquid-Liquid Extraction" to determine the precision and recovery of 59 semivolatile organic compounds in reagent water, ground water and leachate. SW-846 Methods 8270/3510 include instructions for quality control, sample preparation, and analysis by gas chromatography mass spectrometry (GC/MS).

The study design was based upon Youden's non-replicate plan for collaborative tests of analytical methods (1). The test waters: reagent water, used as a control, ground water, and hazardous waste leachate were spiked with 59 semivolatile compounds at six concentration levels (three Youden pairs). In the study of SW-846 Methods 8270/3510, ten laboratories extracted the test waters with methylene chloride, concentrated the extract to 1 mL and analyzed the extract for 59 semivolatile compounds by GC/MS. The results were analyzed using USEPA computer programs titled "Interlaboratory Method Validation Study" (IMVS)(2) produced measures of precision and recovery for the 59 semivolatile compounds in each water type and compared the performance of the method between water types.

The study was conducted by The Bionetics Corporation under the direction of the Quality Assurance Research Division, Environmental Monitoring Systems Laboratory, Cincinnati, OH (EMSL-Cincinnati) under Contract No. 68-03-3254. Analytical work was completed in September 1987. The study report covers a period from September 10, 1986 to December 21, 1987.

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SECTION 1

INTRODUCTION

The Hazardous Waste Management Facility Permit Regulations promulgated in July, 1982 (40 CFR 265) establishes performance standards for the monitoring of ground waters, wastewaters and solid wastes at hazardous waste sites. To facilitate these standards, chemical and physical analyses are required to assess the degree of ground water contamination at and around the area of the site. The Manual: Test Methods for Evaluating Solid Waste Physical and Chemical Methods, (SW-846), November 1986, Third Edition, provides a unified, up-to-date source of information on sampling and analyses related to compliance with Resource Conservation and Recovery Act (RCRA) regulations. The success of pollution control activities, particularly when legal action is involved, depends upon the reliability of the data generated by the laboratories, therefore it is important to evaluate the analytical methods. This is accomplished best through interlaboratory method validation studies.

The Environmental Monitoring Systems Laboratory, Cincinnati, OH (EMSL-Cincinnati), develops/selects analytical methods and provides quality assurance (QA) support to agency programs involving water and waste regulations. In EMSL-Cincinnati, the responsibility for providing QA support is assigned to the Quality Assurance Research Division (QARD). Its QA program is designed to establish the reliability and legal defensibility of waste and waste data collected by the Agency, the state regulating authorities, the private sector, and commercial laboratories performing compliance analyses. One of QARD's QA activities is to conduct interlaboratory method validation studies to evaluate analytical methods selected for the Agency's operating programs such as the Office of Solid Waste.

This report describes an interlaboratory method validation study for SW-846 Method 8270/3510, "GC/MS Method for Semivolatile Organics: Capillary Column Technique; Separatory Funnel Liquid-Liquid Extraction" for the analyses of 59 semivolatile compounds.

The objective of the study was to characterize Method 8270/3510, when performed by multiple laboratories, in terms of recovery, overall and single-analyst precision and the effect of water type on recovery and precision. The study was conducted with ten participating laboratories under the direction of the Quality Assurance Research Division (QARD), EMSL-Cincinnati. The Bionetics Corporation, as primary contractor to QARD, was responsible for the collection and characterization of test waters, preparation of samples, user instructions and report forms, distribution of samples, and screening the returned data for gross errors. The raw data were evaluated statistically by the QARD using a series of computer programs entitled, "Interlaboratory Method Validation Studies" (IMVS). Upon review of the draft report by EMSL-Cincinnati, The Bionetics Corporation prepared the final report.

SECTION 2

CONCLUSIONS

The objective of this study was to characterize the performance of Methods 8270/3510 in terms of recovery, overall precision, single-analyst precision and the effect of water types on recovery and precision. Through the IMVS series of computer programs, statistical analyses of 10,620 analytical values provided estimates of recovery and precision expressed as regression equations. These equations regressed recovery against the true value and overall precision and single-analyst precision against mean recovery for each compound in a given water type. The linear regression equations obtained from this study, and presented in Table 1, can be used to predict the recovery and precision of the compounds studied at concentrations in the ranges investigated in this study.

For the entire project, the IMVS computer programs rejected 17% of the 10,620 data points submitted. The percentage of rejected data did not vary significantly across water types.

The pooled mean recovery for 58 compounds in reagent water, excluding 3-methylcholanthrene, was 77.9% with a standard deviation of 13.3%. Three compounds had recoveries less than 60%. These were chlorobenzilate (26.9%), 7,12-dimethylbenz(a)anthracene (51.3%) and 1,3,5-trinitrobenzene (54.8%).

The overall standard deviation expressed as the percent relative standard deviation (%RSD) across all analytes ranged from 9% to 58% in the three waters tested, except for 3-methylcholanthrene at 104%. The single-analyst precision expressed as the percent relative standard deviation (%RSD-SR) ranged from 6% to 33% across all analytes in the three waters tested. In

all cases, the highest %RSD-SR (poorest precision) was associated with the lowest Youden pair concentration.

Statistical comparisons of the effect of water type were performed on all samples. Ten compounds listed below were affected by the ground water matrix.

2-Naphthylamine	Pronamide
Benzidine	Tris(2,3-dibromopropyl)phosphate
3,3'-Dimethylbenzidine	Kepone
4,4'-Methylene bis(2-chloroaniline)	N-Nitrosomorpholine
3,3'-Dimethoxybenzidine	4-Methylphenol

Two compounds did not perform well during this method validation study. 3-Methylcholanthrene was unstable in the methylene chloride standard mixture provided with the study. All data generated for this compound were unusable. Chlorobenzilate had the lowest recovery, 27%, from reagent water of the 59 compounds tested. The uniform low recoveries among all six concentration levels point to poor extraction efficiency.

Eight compounds exhibited a high degree of variability as a result of poor chromatography: 7,12-dimethylbenz(a)anthracene, 1,3,5-trinitrobenzene, tris(2,3-dibromopropyl)phosphate, dibenzo(a,e)pyrene, benzidine, 3,3'-dimethylbenzidine, 3,3'-dimethoxybenzidine, and 4-nitroquinoline-N-oxide.

Seven compounds: N-nitrosodi-n-butylamine, 1,2-diphenylhydrazine, 2-methylnaphthalene, 1,2,4,5-tetrachlorobenzene, dibenzofuran, dihydrosafrole and safrole appeared to have saturated the detector at the highest concentrations as indicated by lower mean recoveries for the high concentration samples and uniform recoveries for the middle and low concentration samples.

TABLE 1. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

WEIGHTED LINEAR REGRESSION EQUATIONS FOR MEAN RECOVERY AND PRECISION (IN UG/L)

WATER TYPE	N-NITROSOMETHYLETHYLAMINE	N-NITROSODIETHYLAMINE	ANILINE	N-NITROSOPYRROLIDINE
APPLICABLE CONC. RANGE	(9.60 - 480.00)	(9.60 - 480.00)	(9.60 - 480.00)	(9.60 - 480.00)
REAGENT WATER				
SINGLE-ANALYST PRECISION	SR = 0.154X + 0.16	SR = 0.064X + 0.54	SR = 0.080X + 0.42	SR = 0.088X + 0.29
OVERALL PRECISION	S = 0.228X + 0.99	S = 0.160X + 1.34	S = 0.226X - 0.32	S = 0.235X + 0.69
MEAN RECOVERY	X = 0.749C - 1.91	X = 0.843C - 2.14	X = 0.674C - 0.89	X = 0.742C - 2.17
GROUND WATER				
SINGLE-ANALYST PRECISION	SR = 0.102X + 0.04	SR = 0.094X + 0.01	SR = 0.117X + 0.3C	SR = C.172X - 0.49
OVERALL PRECISION	S = 0.128X + 0.98	S = 0.147X + 1.05	S = 0.115X + 1.80	S = C.251X - C.51
MEAN RECOVERY	X = 0.779C - 0.09	X = 0.828C - 0.54	X = 0.756C - 0.56	X = 0.782C - C.07
LEACHATE				
SINGLE-ANALYST PRECISION	SR = 0.087X + 0.37	SR = 0.074X + 0.41	SR = 0.083X + 0.45	SR = C.097X + 0.21
OVERALL PRECISION	S = 0.137X + 1.54	S = 0.147X + 1.51	S = 0.159X + 0.29	S = C.227X - C.35
MEAN RECOVERY	X = 0.744C - 1.24	X = 0.839C - 2.38	X = 0.818C - 1.15	X = 0.863C - 2.29

X = MEAN RECOVERY
C = TRUE VALUE FOR THE CONCENTRATION

TABLE 1 (Continued). STUDY 36/SW 846 METHOD 8270/SEMI-VOLATILES/GC-MS

WEIGHTED LINEAR REGRESSION EQUATIONS FOR MEAN RECOVERY AND PRECISION (IN UG/L)

WATER TYPE	A,A-DIMETHYLPHENETHYLAMIN	P-CHLOROANILINE	2-NITROANILINE	N-NITROSODI-N-BUTYLAMINE
APPLICABLE CONC. RANGE	(20.00 - 480.00)	(20.00 - 480.00)	(20.00 - 480.00)	(9.60 - 480.00)
REAGENT WATER				
SINGLE-ANALYST PRECISION	SR = 0.167X + 2.04	SR = 0.053X + 1.36	SR = 0.085X - 0.31	SR = 0.075X + 1.52
OVERALL PRECISION	S = 0.353X + 0.96	S = 0.139X + 0.07	S = 0.179X + 0.15	S = 0.203X + 0.48
MEAN RECOVERY	X = 1.008C -10.16	X = 0.821C - 1.35	X = 0.737C - 7.75	X = 0.985C + 4.34
GROUND WATER				
SINGLE-ANALYST PRECISION	SR = 0.372X - 1.20	SR = 0.077X + 0.49	SR = 0.095X + 0.14	SR = 0.116X - 0.89
OVERALL PRECISION	S = 0.472X + 2.50	S = 0.124X + 3.59	S = 0.178X - 0.72	S = 0.201X - 0.64
MEAN RECOVERY	X = 0.780C - 9.32	X = 0.785C - 1.28	X = 0.712C - 5.54	X = 0.941C + 6.38
LEACHATE				
SINGLE-ANALYST PRECISION	SR = 0.148X + 1.91	SR = 0.066X + 0.15	SR = 0.068X - 0.09	SR = 0.084X + 0.10
OVERALL PRECISION	S = 0.390X + 2.66	S = 0.125X + 0.10	S = 0.134X - 0.25	S = 0.179X - 0.11
MEAN RECOVERY	X = 0.890C -12.40	X = 0.865C - 1.46	X = 0.803C - 8.74	X = 0.990C + 4.37

X = MEAN RECOVERY

C = TRUE VALUE FOR THE CONCENTRATION

TABLE 1 (Continued). STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

WEIGHTED LINEAR REGRESSION EQUATIONS FOR MEAN RECOVERY AND PRECISION (IN UG/L)

WATER TYPE	3-NITROANILINE	2-NAPHTHYLAMINE	5-NITRO-O-TOLUIDINE	P-NITROANILINE
APPLICABLE CONC. RANGE	(20.00 - 480.00)	(9.60 - 480.00)	(9.60 - 480.00)	(48.00 - 480.00)
REAGENT WATER				
SINGLE-ANALYST PRECISION	SR = 0.078X + 2.28	SR = 0.123X + 1.45	SR = 0.090X + 1.37	SR = 0.073X + 7.96
OVERALL PRECISION	S = 0.257X + 1.59	S = 0.290X + 0.47	S = 0.250X + 0.60	S = 0.457X - 7.08
MEAN RECOVERY	X = 0.920C - 5.33	X = 0.890C - 2.71	X = 0.852C - 1.80	X = 0.934C - 6.71
GROUND WATER				
SINGLE-ANALYST PRECISION	SR = 0.123X + 0.22	SR = 0.144X + 0.75	SR = 0.139X + 0.22	SR = 0.134X + 0.33
OVERALL PRECISION	S = 0.194X + 1.70	S = 0.241X + 2.12	S = 0.160X + 1.20	S = 0.192X + 1.99
MEAN RECOVERY	X = 0.865C - 5.51	X = 0.775C - 4.84	X = 0.812C - 1.29	X = 0.803C - 6.64
LEACHATE				
SINGLE-ANALYST PRECISION	SR = 0.085X + 0.87	SR = 0.089X + 0.63	SR = 0.088X + 0.62	SR = 0.114X + 2.99
OVERALL PRECISION	S = 0.248X + 0.18	S = 0.207X + 1.70	S = 0.315X + 0.04	S = 0.371X - 5.21
MEAN RECOVERY	X = 0.945C - 5.32	X = 0.911C - 5.34	X = 0.958C - 2.34	X = 0.871C - 8.11

X = MEAN RECOVERY
C = TRUE VALUE FOR THE CONCENTRATION

TABLE 1 (Continued). STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

WEIGHTED LINEAR REGRESSION EQUATIONS FOR MEAN RECOVERY AND PRECISION (IN UG/L)

WATER TYPE	1,2-DIPHENYLHYDRAZINE	4-AMINOBIPHENYL	METHAPYRILENE	BENZIDINE
APPLICABLE CONC. RANGE	(9.60 - 480.00)	(9.60 - 480.00)	(9.60 - 480.00)	(48.00 - 480.00)
REAGENT WATER				
SINGLE-ANALYST PRECISION	SR = 0.055X + 0.58	SR = 0.085X + 1.08	SR = 0.103X + 1.37	SR = 0.187X - 1.83
OVERALL PRECISION	S = 0.266X - 0.90	S = 0.254X + 0.99	S = 0.314X + 1.16	S = 0.417X - 1.36
MEAN RECOVERY	X = 0.766C + 1.61	X = 0.845C - 1.46	X = 1.003C - 5.69	X = 1.074C -27.10
GROUND WATER				
SINGLE-ANALYST PRECISION	SR = 0.167X - 1.00	SR = 0.112X + 0.59	SR = 0.128X - 0.21	SR = 0.335X + 1.54
OVERALL PRECISION	S = 0.254X - 1.23	S = 0.229X + 1.32	S = 0.202X - 0.04	S = 0.733X - 0.28
MEAN RECOVERY	X = 0.744C + 1.16	X = 0.820C - 4.30	X = 0.854C - 1.51	X = 0.609C -27.60
LEACHATE				
SINGLE-ANALYST PRECISION	SR = 0.065X + 0.09	SR = 0.091X + 0.46	SR = 0.232X + 0.36	SR = 0.320X - 0.80
OVERALL PRECISION	S = 0.218X - 0.64	S = 0.167X + 1.34	S = 0.299X + 1.93	S = 0.473X + 7.50
MEAN RECOVERY	X = 0.765C + 1.82	X = 0.895C - 1.32	X = 0.799C - 4.52	X = 1.028C -28.00

X = MEAN RECOVERY
C = TRUE VALUE FOR THE CONCENTRATION

TABLE 1 (Continued). STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

WEIGHTED LINEAR REGRESSION EQUATIONS FOR MEAN RECOVERY AND PRECISION (IN UG/L)

WATER TYPE	P-DIMETHYLAMINOAZOBENZENE	3,3 -DIMETHYLBENZIDINE	4,4 -METHYLENE BIS (2-CHL	3,3 -DIMETHOXYBENZIDINE
APPLICABLE CONC. RANGE	(9.60 - 480.00)	(48.00 - 480.00)	(48.00 - 480.00)	(48.00 - 480.00)
REAGENT WATER				
SINGLE-ANALYST PRECISION	SR = 0.062X + 0.57	SR = 0.118X + 3.26	SR = 0.065X + 2.64	SR = 0.087X + 3.64
OVERALL PRECISION	S = 0.221X - 0.20	S = 0.203X + 2.46	S = 0.203X - 3.68	S = 0.202X + 6.02
MEAN RECOVERY	X = 0.856C - 1.75	X = 0.979C -18.00	X = 1.016C -12.67	X = 0.908C -28.71
GROUND WATER				
SINGLE-ANALYST PRECISION	SR = 0.120X - 0.49	SR = 0.154X + 2.44	SR = 0.091X + 3.26	SR = 0.163X + 3.32
OVERALL PRECISION	S = 0.127X + 0.94	S = 0.313X + 5.56	S = 0.172X + 2.28	S = 0.344X + 3.51
MEAN RECOVERY	X = 0.828C - 1.05	X = 0.788C -28.75	X = 0.878C -17.20	X = 0.796C -30.64
LEACHATE				
SINGLE-ANALYST PRECISION	SR = 0.059X + 0.15	SR = 0.084X + 7.90	SR = 0.094X + 0.51	SR = 0.078X + 6.78
OVERALL PRECISION	S = 0.155X + 1.01	S = 0.178X + 5.08	S = 0.144X - 0.39	S = 0.217X + 2.79
MEAN RECOVERY	X = 0.856C - 1.44	X = 0.957C -17.91	X = 0.932C - 7.59	X = 0.961C -24.97

X = MEAN RECOVERY
C = TRUE VALUE FOR THE CONCENTRATION

TABLE 1 (Continued). STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

WEIGHTED LINEAR REGRESSION EQUATIONS FOR MEAN RECOVERY AND PRECISION (IN UG/L)

WATER TYPE	2-METHYLNAPHTHALENE	METHYL METHANE SULFONATE	N-NITROSOMORPHOLINE	4-METHYLPHENOL
APPLICABLE CONC. RANGE	(9.60 - 480.00)	(9.60 - 480.00)	(9.60 - 480.00)	(20.00 - 480.00)
REAGENT WATER				
SINGLE-ANALYST PRECISION	SR = 0.063X + 0.49	SR = 0.077X - 0.11	SR = 0.060X + 0.87	SR = 0.061X + 2.20
OVERALL PRECISION	S = 0.153X - 0.30	S = 0.087X + 0.66	S = 0.137X + 0.84	S = 0.135X + 2.90
MEAN RECOVERY	X = 0.797C + 1.59	X = 0.643C - 0.71	X = 0.652C - 1.22	X = 0.782C - 1.87
GROUND WATER				
SINGLE-ANALYST PRECISION	SR = 0.103X - 0.55	SR = 0.096X + 1.28	SR = 0.090X + 0.50	SR = 0.039X + 3.85
OVERALL PRECISION	S = 0.153X - 0.14	S = 0.175X + 0.69	S = 0.203X - 0.56	S = 0.141X + 4.02
MEAN RECOVERY	X = 0.806C + 1.86	X = 0.609C - 0.67	X = 0.760C + 0.19	X = 0.779C +13.23
LEACHATE				
SINGLE-ANALYST PRECISION	SR = 0.097X - 0.39	SR = 0.078X + 0.27	SR = 0.081X + 0.39	SR = 0.073X + 0.75
OVERALL PRECISION	S = 0.152X - 0.43	S = 0.146X + 0.03	S = 0.261X + 0.07	S = 0.244X - 0.82
MEAN RECOVERY	X = 0.802C + 1.34	X = 0.682C - 1.11	X = 0.710C - 0.81	X = 0.834C - 1.48

X = MEAN RECOVERY
C = TRUE VALUE FOR THE CONCENTRATION

TABLE 1 (Continued). STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

WEIGHTED LINEAR REGRESSION EQUATIONS FOR MEAN RECOVERY AND PRECISION (IN UG/L)

WATER TYPE	2,6-DICHLOROPHENOL	1,2,4,5-TETRACHLOROBENZEN	ISOSAFROLE	DIBENZOFURAN
APPLICABLE CONC. RANGE	(20.00 - 480.00)	(9.60 - 480.00)	(9.60 - 480.00)	(9.60 - 480.00)
REAGENT WATER				
SINGLE-ANALYST PRECISION	SR = 0.049X + 0.57	SR = 0.097X - 0.27	SR = 0.097X - 0.43	SR = 0.092X - 0.49
OVERALL PRECISION	S = 0.096X + 1.90	S = 0.157X - 0.37	S = 0.146X + 0.57	S = 0.143X - 0.16
MEAN RECOVERY	X = 0.858C + 0.89	X = 0.694C + 1.47	X = 0.821C + 0.06	X = 0.824C + 2.05
GROUND WATER				
SINGLE-ANALYST PRECISION	SR = 0.056X + 0.85	SR = 0.097X + 0.25	SR = 0.071X + 0.05	SR = 0.033X + 0.31
OVERALL PRECISION	S = 0.138X - 0.13	S = 0.130X + 0.44	S = 0.093X + 1.16	S = 0.113X + 0.08
MEAN RECOVERY	X = 0.833C + 2.90	X = 0.647C + 1.19	X = 0.806C + 0.29	X = 0.736C + 2.18
LEACHATE				
SINGLE-ANALYST PRECISION	SR = 0.064X + 0.08	SR = 0.073X + 0.49	SR = 0.065X + 0.60	SR = 0.066X + 0.11
OVERALL PRECISION	S = 0.196X - 0.82	S = 0.184X + 0.66	S = 0.175X - 0.00	S = 0.207X - 0.62
MEAN RECOVERY	X = 0.892C - 0.84	X = 0.687C + 1.33	X = 0.867C - 1.02	X = 0.813C + 1.46

X = MEAN RECOVERY
C = TRUE VALUE FOR THE CONCENTRATION

TABLE 1 (Continued). STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

WEIGHTED LINEAR REGRESSION EQUATIONS FOR MEAN RECOVERY AND PRECISION (IN UG/L)

WATER TYPE	N-NITROSODIPHENYLAMINE	PHENACETIN	PRONAMIDE	2-ACETYLAMINOFLUORENE
APPLICABLE CONC. RANGE	(9.60 - 480.00)	(48.00 - 480.00)	(20.00 - 480.00)	(48.00 - 480.00)
REAGENT WATER				
SINGLE-ANALYST PRECISION	SR = 0.141X - 0.82	SR = 0.102X + 4.21	SR = 0.104X + 1.07	SR = 0.107X + 3.79
OVERALL PRECISION	S = 0.187X - 0.34	S = 0.209X - 1.43	S = 0.143X + 1.16	S = 0.199X + 1.99
MEAN RECOVERY	X = 0.911C + 1.52	X = 0.925C - 7.75	X = 1.076C - 3.09	X = 1.003C -14.34
GROUND WATER				
SINGLE-ANALYST PRECISION	SR = 0.075X + 0.25	SR = 0.074X + 0.11	SR = 0.063X + 1.20	SR = 0.104X + 1.66
OVERALL PRECISION	S = 0.166X - 0.07	S = 0.163X + 4.62	S = 0.171X - 0.05	S = 0.329X - 6.21
MEAN RECOVERY	X = 0.936C + 1.99	X = 0.766C - 0.62	X = 0.925C + 0.93	X = 1.146C -14.00
LEACHATE				
SINGLE-ANALYST PRECISION	SR = 0.056X + 0.55	SR = 0.066X + 2.06	SR = 0.074X + 0.71	SR = 0.069X + 4.26
OVERALL PRECISION	S = 0.201X - 0.65	S = 0.232X + 0.06	S = 0.159X + 2.66	S = 0.173X + 5.02
MEAN RECOVERY	X = 0.958C - 0.04	X = 1.050C - 8.60	X = 1.046C - 1.07	X = 1.076C -13.69

X = MEAN RECOVERY
C = TRUE VALUE FOR THE CONCENTRATION

TABLE 1 (Continued). STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

WEIGHTED LINEAR REGRESSION EQUATIONS FOR MEAN RECOVERY AND PRECISION (IN UG/L)

WATER TYPE	TRIS(2,3-DIBROMOPROPYL) P	BENZYL ALCOHOL	DIHYDROSAFROLE	1,3-DINITROBENZENE
APPLICABLE CONC. RANGE	(48.00 - 480.00)	(20.00 - 480.00)	(9.60 - 480.00)	(48.00 - 480.00)
REAGENT WATER				
SINGLE-ANALYST PRECISION	SR = 0.182X + 1.60	SR = 0.053X + 2.70	SR = 0.079X + 1.01	SR = 0.092X + 3.72
OVERALL PRECISION	S = 0.330X + 8.13	S = 0.099X + 3.49	S = 0.171X + 0.38	S = 0.129X + 4.96
MEAN RECOVERY	X = 1.044C -36.30	X = 0.730C - 2.24	X = 0.753C + 1.17	X = 0.900C - 7.87
GROUND WATER				
SINGLE-ANALYST PRECISION	SR = 0.053X + 9.92	SR = 0.080X + 0.51	SR = 0.089X - 0.22	SR = 0.124X - 2.51
OVERALL PRECISION	S = 0.501X + 1.75	S = 0.127X + 0.02	S = 0.155X - 0.56	S = 0.170X - 2.13
MEAN RECOVERY	X = 0.741C -16.44	X = 0.744C + 1.39	X = 0.753C + 1.47	X = 0.817C - 0.05
LEACHATE				
SINGLE-ANALYST PRECISION	SR = 0.134X + 1.43	SR = 0.057X + 0.51	SR = 0.038X - 0.04	SR = 0.050X + 2.56
OVERALL PRECISION	S = 0.737X - 9.22	S = 0.145X + 1.82	S = 0.245X + 0.10	S = 0.200X + 1.11
MEAN RECOVERY	X = 1.611C -61.48	X = 0.500C - 3.63	X = 0.807C + 0.87	X = 0.999C -11.39

X = MEAN RECOVERY
C = TRUE VALUE FOR THE CONCENTRATION

TABLE 1 (Continued). STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

WEIGHTED LINEAR REGRESSION EQUATIONS FOR MEAN RECOVERY AND PRECISION (IN UG/L)

WATER TYPE	CHLOROBENZILATE	KEPONE	2-METHYLPHENOL	ACETOPHENONE
APPLICABLE CONC. RANGE	(9.60 - 480.00)	(20.00 - 480.00)	(20.00 - 480.00)	(9.60 - 480.00)
REAGENT WATER				
SINGLE-ANALYST PRECISION	SR = 0.169X + 0.76	SR = 0.086X + 1.31	SR = 0.093X - 0.14	SR = 0.113X - 0.51
OVERALL PRECISION	S = 0.797X + 0.46	S = 0.129X + 0.99	S = 0.184X + 1.26	S = 0.152X + 0.56
MEAN RECOVERY	X = 0.270C - 0.06	X = 0.861C - 5.28	X = 0.771C - 1.82	X = 0.835C - 0.13
GROUND WATER				
SINGLE-ANALYST PRECISION	SR = 0.088X + 0.43	SR = 0.224X + 0.96	SR = 0.103X - 0.01	SR = 0.093X - 0.22
OVERALL PRECISION	S = 0.656X + 0.00	S = 0.354X + 1.21	S = 0.119X + 2.12	S = 0.148X + 1.90
MEAN RECOVERY	X = 0.354C - 1.08	X = 0.457C - 3.46	X = 0.761C + 4.99	X = 0.806C + 2.07
LEACHATE				
SINGLE-ANALYST PRECISION	SR = 0.255X + 0.01	SR = 0.143X + 0.42	SR = 0.051X + 2.36	SR = 0.072X - 0.04
OVERALL PRECISION	S = 0.569X + 0.08	S = 0.152X + 2.68	S = 0.149X + 1.06	S = 0.120X + 0.49
MEAN RECOVERY	X = 0.211C - 0.55	X = 0.929C - 5.55	X = 0.729C - 1.39	X = 0.788C + 0.03

X = MEAN RECOVERY
C = TRUE VALUE FOR THE CONCENTRATION

TABLE 1 (Continued). STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

WEIGHTED LINEAR REGRESSION EQUATIONS FOR MEAN RECOVERY AND PRECISION (IN UG/L)

WATER TYPE	N-NITROSOPIPERIDINE	HEXACHLOROPROPENE	SAFROLE	2,4,5-TRICHLOROPHENOL
APPLICABLE CONC. RANGE	(9.60 - 480.00)	(9.60 - 480.00)	(20.00 - 480.00)	(46.00 - 480.00)
REAGENT WATER				
SINGLE-ANALYST PRECISION	SR = 0.070X - 0.04	SR = 0.127X - 0.03	SR = 0.109X - 0.55	SR = 0.053X + 0.27
OVERALL PRECISION	S = 0.130X - 0.18	S = 0.300X + 0.62	S = 0.158X + 0.04	S = 0.122X + 0.25
MEAN RECOVERY	X = 0.926C - 0.72	X = 0.625C - 1.51	X = 0.812C - 0.14	X = 0.924C - 9.27
GROUND WATER				
SINGLE-ANALYST PRECISION	SR = 0.136X + 0.14	SR = 0.051X + 1.30	SR = 0.142X - 1.21	SR = 0.089X - 2.37
OVERALL PRECISION	S = 0.133X + 2.33	S = 0.243X + 0.72	S = 0.218X - 0.78	S = 0.162X - 4.12
MEAN RECOVERY	X = 0.863C + 3.41	X = 0.647C - 2.48	X = 0.740C + 2.20	X = 0.872C + 0.06
LEACHATE				
SINGLE-ANALYST PRECISION	SR = 0.116X - 0.03	SR = 0.078X + 0.35	SR = 0.061X + 0.92	SR = 0.060X + 1.02
OVERALL PRECISION	S = 0.142X + 0.38	S = 0.224X + 0.76	S = 0.161X + 1.51	S = 0.108X + 4.25
MEAN RECOVERY	X = 0.843C - 0.25	X = 0.585C - 1.40	X = 0.758C + 2.13	X = 0.847C - 2.05

X = MEAN RECOVERY
C = TRUE VALUE FOR THE CONCENTRATION

TABLE 1 (Continued). STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

WEIGHTED LINEAR REGRESSION EQUATIONS FOR MEAN RECOVERY AND PRECISION (IN UG/L)

WATER TYPE	1,4-DINITROBENZENE	PENTACHLOROBENZENE	2,3,4,6-TETRACHLOROPHENOL	DIPHENYLAMINE
APPLICABLE CONC. RANGE	(46.00 - 480.00)	(9.60 - 480.00)	(46.00 - 480.00)	(9.60 - 480.00)
REAGENT WATER				
SINGLE-ANALYST PRECISION	SR = 0.065X - 1.00	SR = 0.052X - 0.07	SR = 0.049X + 2.46	SR = 0.109X - 0.51
OVERALL PRECISION	S = 0.102X + 2.81	S = 0.079X + 1.02	S = 0.037X + 1.92	S = 0.133X + 0.74
MEAN RECOVERY	X = 0.929C -10.01	X = 0.802C + 0.24	X = 0.888C - 7.55	X = 0.896C - 0.86
GROUND WATER				
SINGLE-ANALYST PRECISION	SR = 0.112X - 2.99	SR = 0.033X - 0.30	SR = 0.068X + 1.39	SR = 0.163X - 1.31
OVERALL PRECISION	S = 0.110X - 0.25	S = 0.119X + 0.87	S = 0.164X + 4.07	S = 0.227X - 0.89
MEAN RECOVERY	X = 0.874C - 4.95	X = 0.790C + 0.19	X = 0.845C - 4.77	X = 0.880C + 0.51
LEACHATE				
SINGLE-ANALYST PRECISION	SR = 0.066X + 3.20	SR = 0.054X + 0.32	SR = 0.074X + 2.02	SR = 0.065X + 0.86
OVERALL PRECISION	S = 0.091X + 4.14	S = 0.116X + 1.30	S = 0.112X + 4.06	S = 0.141X + 0.85
MEAN RECOVERY	X = 0.914C - 7.18	X = 0.740C + 0.83	X = 0.802C - 1.83	X = 0.894C + 0.55

X = MEAN RECOVERY
C = TRUE VALUE FOR THE CONCENTRATION

TABLE 1 (Continued). STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

WEIGHTED LINEAR REGRESSION EQUATIONS FOR MEAN RECOVERY AND PRECISION (IN UG/L)

WATER TYPE	PENTACHLORONITROBENZENE	2-SEC-BUTYL- 4,6-DINITROP	7,12-DIMETHYLBENZ(A)ANTHR	3-METHYCHOLANTHRENE
APPLICABLE CONC. RANGE	(46.00 - 480.00)	(46.00 - 480.00)	(20.00 - 480.00)	(20.00 - 480.00)
REAGENT WATER				
SINGLE-ANALYST PRECISION	SR = 0.132X - 4.79	SR = 0.117X - 0.64	SR = 0.254X - 1.71	SR = 0.243X - 2.56
OVERALL PRECISION	S = 0.092X + 4.15	S = 0.151X + 6.36	S = 0.483X + 5.74	S = 1.113X + 4.65
MEAN RECOVERY	X = 0.886C - 5.41	X = 0.975C -18.61	X = 0.524C - 0.71	X = 8.244C -5E.86
GROUND WATER				
SINGLE-ANALYST PRECISION	SR = 0.176X - 3.92	SR = 0.135X - 1.09	SR = 0.221X + 0.40	SR = 0.242X -14.21
OVERALL PRECISION	S = 0.205X - 3.30	S = 0.203X - 1.53	S = 0.533X + 2.68	S = 0.919X - 1.98
MEAN RECOVERY	X = 0.817C - 2.50	X = 0.974C -1o.31	X = 0.398C - 2.05	X = 9.941C -28.97
LEACHATE				
SINGLE-ANALYST PRECISION	SR = 0.067X + 2.26	SR = 0.162X + 1.56	SR = 0.302X - 1.37	SR = 0.242X + 2.84
OVERALL PRECISION	S = 0.071X + 4.50	S = 0.219X + 1.81	S = 0.482X - 0.14	S = 1.077X +12.48
MEAN RECOVERY	X = 0.821C + 0.75	X = 1.030C -23.CO	X = 0.621C - 4.76	X = 8.853C -94.41

X = MEAN RECOVERY
C = TRUE VALUE FOR THE CONCENTRATION

TABLE 1 (Continued). STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

WEIGHTED LINEAR REGRESSION EQUATIONS FOR MEAN RECOVERY AND PRECISION (IN UG/L)

WATER TYPE	DIBENZO(A,E)PYRENE	ETHYL METHANE SULFONATE	1,2-DIBROMO-3-CHLOROPROPA	1,2-DINITROBENZENE
APPLICABLE CONC. RANGE	(46.00 - 480.00)	(9.60 - 480.00)	(20.00 - 480.00)	(20.00 - 480.00)
REAGENT WATER				
SINGLE-ANALYST PRECISION	SR = 0.129X + 6.01	SR = 0.097X - 0.40	SR = 0.124X + 0.20	SR = 0.054X - 0.17
OVERALL PRECISION	S = 0.418X + 9.30	S = 0.121X + 0.51	S = 0.196X + 1.00	S = 0.070X + 1.34
MEAN RECOVERY	X = 1.094C -16.84	X = 0.803C + 0.08	X = 0.703C - 7.62	X = 0.904C - 3.13
GROUND WATER				
SINGLE-ANALYST PRECISION	SR = 0.357X - 4.16	SR = 0.098X - 0.07	SR = 0.146X - 0.39	SR = 0.145X - 0.66
OVERALL PRECISION	S = 0.367X + 0.88	S = 0.137X + 0.56	S = 0.214X + 0.84	S = 0.251X - 1.09
MEAN RECOVERY	X = 0.951C -17.70	X = 0.899C + 0.65	X = 0.632C - 6.78	X = 0.812C + 0.24
LEACHATE				
SINGLE-ANALYST PRECISION	SR = 0.487X - 5.48	SR = 0.059X + 0.34	SR = 0.058X + 1.08	SR = 0.059X + 1.30
OVERALL PRECISION	S = 0.673X + 1.92	S = 0.068X + 0.88	S = 0.176X + 0.03	S = 0.083X + 1.21
MEAN RECOVERY	X = 1.399C -54.63	X = 0.797C + 0.17	X = 0.645C - 6.64	X = 0.869C - 2.19

X = MEAN RECOVERY
C = TRUE VALUE FOR THE CONCENTRATION

TABLE 1 (Continued). STUDY 36/SW 846 METHOD 8270/SEMI-VOLATILES/GC-MS

WEIGHTED LINEAR REGRESSION EQUATIONS FOR MEAN RECOVERY AND PRECISION (IN UG/L)

WATER TYPE	1,3,5-TRINITROBENZENE	DIALLATE	4-NITROQUINOLINE-N-OXIDE
APPLICABLE CONC. RANGE	(46.00 - 480.00)	(9.60 - 480.00)	(46.00 - 480.00)
REAGENT WATER			
SINGLE-ANALYST PRECISION	SR = 0.256X - 5.39	SR = 0.102X - 0.50	SR = 0.172X - 0.33
OVERALL PRECISION	S = 0.288X + 3.82	S = 0.164X - 0.42	S = 0.286X + 5.47
MEAN RECOVERY	X = 0.637C - 9.21	X = 0.793C + 0.09	X = 0.950C -30.73
GROUND WATER			
SINGLE-ANALYST PRECISION	SR = 0.222X - 0.89	SR = 0.177X - 1.22	SR = 0.269X - 2.44
OVERALL PRECISION	S = 0.383X + 0.83	S = 0.183X - 0.83	S = 0.301X + 2.21
MEAN RECOVERY	X = 0.521C -11.52	X = 0.823C + 0.11	X = 0.905C -27.46
LEACHATE			
SINGLE-ANALYST PRECISION	SR = 0.155X + 4.67	SR = 0.073X - 0.31	SR = 0.129X + 2.00
OVERALL PRECISION	S = 0.440X + 2.17	S = 0.166X - 0.46	S = 0.220X + 7.69
MEAN RECOVERY	X = 0.576C - 8.78	X = 0.856C + 0.23	X = 0.927C -29.15

X = MEAN RECOVERY
C = TRUE VALUE FOR THE CONCENTRATION

MESSAGE SUMMARY: MESSAGE NUMBER - COUNT

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SECTION 3

RECOMMENDATIONS

SW-846 Methods 8270/3510 are recommended for the analyses of Appendix IX compounds with the exception of the analytes listed in Table 2 and with the following observations.

* The strongly acidic and basic conditions encountered during the extraction procedure were postulated to have caused chlorobenzilate, methylmethane sulfonate, N-nitrosomorpholine, hexachloropropene and 7,12-dimethylbenz(a)anthracne to have poor extraction efficiencies. Milder extraction conditions may improve extraction recoveries for these compounds.

* Stability study analyses revealed that the aromatic amines were reacting with the solvent, acetone, to form Schiff bases. Changing the solvent to methanol remedied the immediate problem but this situation should be addressed in the final method write-up.

* 3-Methylcholanthrene (molecular weight 268) dehydrogenated in methylene chloride to form a compound whose molecular weight was 266. The causes of this reaction have not been investigated. Quantitation by GC/MS is not possible when a compound's structure changes in standard solution. Further analytical work is recommended to examine this reaction. Analysts should be alerted to this situation in the final method write-up.

* SW-846 Method 8270 recommends use of a DB-5 fused silica column with a film thickness of 1.0 um while the preliminary analytical

work, performed under another contract, used a DB-5 column with a film thickness of 0.25 um. Further analytical work is recommended to determine which film thickness would offer the greater advantages.

SECTION 4

DESCRIPTION OF STUDY

Two SW-846 methods were investigated in this study. Method 3510 entitled "Separatory Funnel Liquid-Liquid Extraction" was used for the extraction procedure and Method 8270 entitled "GC/MS Method for Semivolatile Organics: Capillary Column Technique" was used for the determinative step.

Method 8270 is applicable to Appendix IX semivolatile compounds (7). However, this study was limited to those compounds not previously covered under USEPA Method Study 30 on Method 625, a similar GC/MS method. Method 625 uses packed column chromatography while Method 8270 uses capillary column chromatography. It was assumed there would be no significant difference in the computed statistics of the compounds covered by both methods therefore they were not included in this study. Of the remaining 72 compounds, 13 were found to be unsuitable for the study. Table 2 lists these compounds and the reasons they were excluded. The remaining 59 compounds were divided into three mixes for this method study.

METHOD SUMMARY

One liter of sample water was extracted three times with 60 mL portions of methylene chloride at pH > 11 then re-extracted three times with 60 mL portions of methylene chloride of pH < 2. The collected extracts were passed through sodium sulfate then concentrated to 1.0 mL using Kuderna-Danish apparatus. The concentrated extracts were injected into a GC/MS instrument equipped with a 30 meter narrow bore DB-5 fused silica capillary column or equivalent.

TABLE 2. RCRA APPENDIX IX ANALYTES NOT INCLUDED IN METHOD 8270

Compound	Reason for Exclusion from Study
p-Benzoquinone	No recovery at 20 and 600 ppb.
Benzenethiol	Unstable in methanol or acetone.
Pentachloroethane	Decomposes to tetrachloroethene with less than 2% recovery at 600 ppb.
Resorcinol	No recovery at 20 and 600 ppb.
Hexachlorocyclopentadiene	Unstable by thermal decomposition and solvent reactivity.
p-Naphthoquinone	No recovery at 20 and 600 ppb.
Aramite	No recovery at 50 ppb. 6% recovery at 600 ppb. Four peaks are produced from 96% pure material.
Hexachlorophene	No recovery at 50 ppb. 18% recovery at 600 ppb.
Dibenzo (a,h) pyrene	Insoluble in spiking solvents and commercially unavailable.
Dibenzo (a,i) pyrene	No recovery at 50 ppb. Detection limit approximately 150 ppb.
n-Nitrosodimethylamine	Compound coelutes with solvent. 30% recovery at 10 ppb.
1-Naphthylamine	20% recovery at 10 ppb.
Phthalic anhydride	No recovery at 100 ppb.

STUDY DESIGN

The design of the study was based upon Youden's non-replicate design for collaborative evaluation of analytical methods (1). In this design, sample solutions are prepared in pairs, such that the analyte concentrations of the pairs vary between 5-20% of the mean of the pairs. For this study, spiking solution concentrates of the 59 compounds were prepared at six concentration levels, as three Youden pairs. The spiking solutions were divided into three mixes to facilitate chromatographic resolution during analysis and to maximize compound solubility at high concentrate levels. The ampulled concentrates were used to fortify three water matrices. Analysts from ten participating laboratories were directed to extract the samples and perform a single analysis on each extract and report one value for each analyte at each concentration level. Analyses in reagent water evaluated the proficiency of the method on a sample free of interferences; analyses in the other waters were intended to reveal the effects of interferences on the method. The six concentration levels for the 59 compounds are given in Table 3.

Each participating laboratory was required to analyze a matrix blank and a quality control sample. Acceptance limits were provided with the quality control sample to give the participating laboratories their "in-control" limits. Each laboratory also received a set of standard solutions for use in preparation of calibration curves. The cost and limited availability of several of the compounds included in this study necessitated this course of action.

VERIFICATION ANALYSES

Samples and standard solutions were analyzed by the primary contractor prior to distribution and recoveries compared to freshly prepared standards to verify that the solutions were properly prepared. At the conclusion of the method study, the samples and standard solutions, in ampuls, were analyzed again and recoveries compared to freshly prepared standards to verify the stability of each compound throughout the period of the study.

TABLE 3. MIX 1 SAMPLE CONCENTRATION LEVELS (µg/L)

Compounds	Amp 1	Amp 2	Amp 3	Amp 4	Amp 5	Amp 6
N-Nitrosomethylethylamine	480	400	120	96	13.6	9.6
N-Nitrosodiethylamine	480	400	120	96	13.6	9.6
Aniline	480	400	120	96	13.6	9.6
N-Nitrosopyrrolidine	480	400	120	96	13.6	9.6
a,a-Dimethylphenethylamine	480	400	160	120	24.0	20.0
p-Chloroaniline	480	400	160	120	24.0	20.0
N-Nitrosodi-n-butylamine	480	400	120	96	13.6	9.6
2-Nitroaniline	480	400	160	120	24.0	20.0
3-Nitroaniline	480	400	160	120	24.0	20.0
2-Naphthylamine	480	400	120	96	13.6	9.6
5-Nitro-o-toluidine	480	400	120	96	13.6	9.6
p-Nitroaniline	480	400	200	160	64.0	48.0
1,2-Diphenylhydrazine	480	400	120	96	13.6	9.6
4-Aminobiphenyl	480	400	120	96	13.6	9.6
Methapyrilene	480	400	120	96	13.6	9.6
Benzidine	480	400	200	160	64.0	48.0
p-Dimethylaminoazobenzene	480	400	120	96	13.6	9.6
3,3'-Dimethylbenzidine	480	400	200	160	64.0	48.0
4,4'-Methylenebis(2-chloro-aniline)	480	400	200	160	64.0	48.0
3,3'-Dimethoxybenzidine	480	400	200	160	64.0	48.0
2-Methylnaphthalene	480	400	120	96	13.6	9.6

continued

TABLE 3 (continued). MIX 2 SAMPLE CONCENTRATION LEVELS (µg/L)

Compounds	Amp 1	Amp 2	Amp 3	Amp 4	Amp 5	Amp 6
Methylmethane sulfonate	480	400	120	96	13.6	9.6
N-Nitrosomorpholine	480	400	120	96	13.6	9.6
4-Methylphenol	480	400	160	120	24.0	20.0
2,6-Dichlorophenol	480	400	160	120	24.0	20.0
1,2,4,5-Tetrachlorobenzene	480	400	120	96	13.6	9.6
Isosafrole	480	400	120	96	13.6	9.6
Dibenzofuran	480	400	120	96	13.6	9.6
N-Nitrosodiphenylamine	480	400	120	96	13.6	9.6
Phenacetin	480	400	200	160	64.0	48.0
Pronamide	480	400	160	120	24.0	20.0
2-Acetylaminofluorene	480	400	200	160	64.0	48.0
Tris(2,3-dibromopropyl) phosphate	480	400	200	160	64.0	48.0
Benzyl alcohol	480	400	160	120	24.0	20.0
Dihydrosafrole	480	400	120	96	13.6	9.6
1,3-Dinitrobenzene	480	400	200	160	64.0	48.0
Chlorobenzilate	480	400	120	96	13.6	9.6
Kepone	480	400	160	120	24.0	20.0

continued

TABLE 3 (Continued). MIX 3 SAMPLE CONCENTRATION LEVELS (µg/L)

Compounds	Amp 1	Amp 2	Amp 3	Amp 4	Amp 5	Amp 6
2-Methylphenol	480	400	160	120	24.0	20.0
Acetophenone	480	400	120	96	12.0	9.6
N-Nitrosopiperidine	480	400	120	96	12.0	9.6
Hexachloropropene	480	400	120	96	12.0	9.6
Safrole	480	400	160	120	24.0	20.0
2,4,5-Trichlorophenol	480	400	200	160	68.0	48.0
1,4-Dinitrobenzene	480	400	200	160	68.0	48.0
Pentachlorobenzene	480	400	120	96	12.0	9.6
2,3,4,6-Tetrachlorophenol	480	400	200	160	68.0	48.0
Diphenylamine	480	400	120	96	12.0	9.6
Pentachloronitrobenzene	480	400	200	160	68.0	48.0
2-sec-Butyl-4,6-Dinitrophenol	480	400	200	160	68.0	48.0
7,12-Dimethylbenz(a) anthracene	480	400	160	120	24.0	20.0
3-Methycholanthrene	480	400	160	120	24.0	20.0
Dibenzo(a,e)pyrene	480	400	200	160	68.0	48.0
Ethylmethane sulfonate	480	400	120	96	12.0	9.6
1,2-Dibromo-3-chloropropane	480	400	160	120	24.0	20.0
1,2-Dinitrobenzene	480	400	160	120	24.0	20.0
1,3,5-Trinitrobenzene	480	400	200	160	68.0	48.0
Di-allate	480	400	120	96	12.0	9.6
4-Nitroquinoline-N-oxide	480	400	200	160	68.0	48.0

SELECTION OF THE MATRIX WATERS

Two waters were collected from hazardous waste sites for use in this study. A ground water sample was collected from a monitoring well at a sanitary landfill and a leachate sample was collected from a closed cell at a hazardous waste landfill.

GC/MS analyses of the ground water sample revealed no background concentrations of the 59 analytes in the study. The leachate sample, on the other hand, contained phenol and phenolic compounds. This matrix was ultimately diluted to 10% leachate to reduce the phenolic background concentration to levels that would not saturate the instrument detector. Interferences with the study compounds were not found.

SELECTION OF PARTICIPATING LABORATORIES

The Quality Assurance Research Division of EMSL-Cincinnati was responsible for the selection of the participating laboratories. As per the standard competitive bid process, an abstract of the scope of work was announced in the Commerce Business Daily. Over 100 laboratories were forwarded the complete request for proposal (RFP) which included the evaluation criteria upon which the offeror would be scored.

Submitted technical proposals were evaluated based upon laboratory experience and quality control practices. Laboratories whose proposals were acceptable were evaluated further in a preaward performance evaluation study. The participants selected for the formal study were the ten laboratories with acceptable proposals who performed best in the preaward study. They were as follows:

ACZ, Inc.

Cambridge Analytical Associates

Data Chem

Lancaster Laboratories, Inc.

J.M. Montgomery Consulting Engineers, Inc.

Pacific Analytical, Inc.

PEI Associates, Inc.

Science Applications International Corp.

Southwest Research Institute

Thermo Analytical, Inc.

SECTION 5

TREATMENT OF DATA

This interlaboratory study was conducted to determine the recovery and precision of SW-846 Methods 8270/3510 in analyses of 59 compounds in waters and leachate. Statistical analyses implementing ASTM Standard Practice D2777-77 (4) were performed in computer programs referred to as IMVS (2). IMVS includes: tests for the rejection of outliers (laboratories and individual data points), summary statistics by concentration level for mean recovery, overall and single-analyst standard deviations (precision), and regression equations expressing the linear relationships between true concentration and mean recovery, and the precision statistics and mean recovery, and a test of the effect of water type on recovery and precision (5). A detailed description of the statistical procedures is presented below.

REJECTION OF OUTLIERS

Spurious data points are always a part of any set of data collected during an interlaboratory test program. It is important to identify and remove these data points because they can result in summary statistics which are not truly representative of the method performance. However, some erratic behavior in the data may be directly related to some facet of the method itself. Therefore, spurious data points should not be removed indiscriminately, and any points that are removed should be identified since further investigation of the analytical conditions related to the outliers might be of value. In some cases the data points which are deleted may actually be closer to the true concentration than the retained data. This is not inconsistent since outliers are judged relative to the average value

of the data and not with respect to the true concentration. Data rejected as outliers for this study as a result of tests for outliers have been identified by the symbol "*" in the raw data tables.

YOUDEN'S LABORATORY RANKING PROCEDURE

In some cases the analytical values reported by a specific laboratory are so consistently high or low that a large systematic error can be attributed to that laboratory. These data are not representative of the method and should be rejected. Youden's ranking test (1) for outlying laboratories was applied separately to data from each of the waters studied at the 5% level of significance.

The Youden laboratory ranking procedure requires a complete set of data from every laboratory within a given water type. Missing data from laboratory "i" for water type "j" were replaced by the following procedure. Letting X_{ijk} denote the reported measurement from laboratory "i" for water type "j" and concentration level C_k, it is assumed that

$$X_{ijk} = \beta_j \cdot C_k^{\gamma_j} \cdot L_i \cdot \varepsilon_{ijk}$$

where β_j and γ_j are fixed parameters which determine the effect of the water type "j"; L_i is the systematic error due to laboratory "i" and ε_{ijk} is the random within laboratory error. Taking natural logarithms, it follows that

$$\ell n\, X_{ijk} = \ell n\, \beta_j + \gamma_j\, \ell n\, C_k + \ell n\, L_i + \ell n\, \varepsilon_{ijk}$$

which is a linear regression model with dependent variable $\ell n\, X_{ijk}$ and independent variable $\ell n\, C_k$. Details and justification for this model are discussed in the section "Comparison of Recovery and Precision Across Water Types".

The natural logarithms of the individual laboratory's data were regressed against the natural logarithms of the true concentration levels for the six ampuls in each water type. The predicted values $\ell n\ \hat{X}_{ijk}$ were obtained from the regression equation, and the missing values for X_{ijk} were estimated by $\hat{X}_{ijk} = \exp(\ell n\ \hat{X}_{ijk})$, where exp(X) denotes the constant e raised to the power X.

If the ranking test rejected a laboratory of a specific water type, then all of the laboratory's data for that water type were rejected as outliers. The rejected values were excluded from all the remaining analyses. In addition, after completion of the laboratory ranking procedure, the predicted values created to fill in for the missing data were rejected and excluded from further analyses for all laboratories.

TESTS FOR INDIVIDUAL OUTLIERS

The data remaining after the laboratory ranking procedure were grouped by water type. For each water type, the data were broken down into six subsets defined by the six concentration levels (ampuls) used in the study. For each subset of data, all missing, "less than", zero, and "nondetect" data were rejected. Next, the test for individual outliers of Thompson (6) suggested in the ASTM Standard Practice D2777-77 was applied to the data using a 5% significance level. If an individual data point was rejected based on this test, it was removed from the subset, and the test was repeated using the remaining data in the subset. This process was continued until no additional data could be rejected.

STATISTICAL DATA SUMMARIES

Several summary statistics were calculated using the data remaining for each concentration level after the outlier rejection tests were performed. These summary statistics include: the number of retained data points, the mean recovery, recovery as a percentage of the true concentration, the absolute overall and single-analyst standard deviations, and the relative

overall and single-analyst standard deviations as a percentage of the mean recovery. The basic formulas used to calculate these statistics are presented below where $X_1, X_2, \ldots, X_n$ denote the values of the n retained data points for a specific concentration level.

Mean recovery (X):

$$X = \frac{1}{n} \sum_{i=1}^{n} X_i$$

The usual concentration notation for mean recovery is $\bar{X}$. However, to be consistent with IMVS computer output, the symbol X is used in this report to represent $\bar{X}$.

Recovery as a Percent Relative Error:

$$\% \text{ RE} = \frac{X - \text{True Value}}{\text{True Value}} \quad (100)$$

Overall Standard Deviation:

$$S = \sqrt{\frac{1}{n - 1} \sum_{i=1}^{n} (X_i - X)^2}$$

and

Percent Relative Overall Standard Deviation:

$$\%\text{RSD} = \frac{S}{X} \quad (100)$$

The overall standard deviation, S, indicates the precision associated with measurements generated by a group of laboratories. This represents

represents the broad variation in the data collected in an interlaboratory study. However, a measure of how well an individual analyst can expect to perform in his own laboratory is another important measure of precision. This single-analyst precision, denoted by SR, was estimated for each Youden pair by

$$SR = \sqrt{\frac{1}{2(m-1)} \sum_{i=1}^{m} (D_i - D)^2}$$

where

m = the number of complete sets of Youden pair observations remaining after outliers have been removed,

D_i = the difference between the observations in the ith Youden pair

D = average of D_i values.

The percent relative single-analyst standard deviation was calculated by

$$\%RSD\text{-}SR = \frac{SR}{X^*} (100)$$

where X^* is the average of the two mean recovery statistics corresponding to the two concentration levels defining the particular Youden pair.

These summary statistics provide detailed information on the recovery and precision of the data obtained for each concentration level. One objective of the statistical analysis of the data is to summarize the information about recovery and precision which is contained in the statistics.

A systematic relationship exists between the mean recovery (X) and the

true concentration level (C) of the analyte in the sample. In addition, there are often systematic relationships between the precision statistics (S and SR) and the mean recovery (X). Usually, these systematic relationships can be adequately approximated by a linear relationship (i.e., by a straight line). Once these straight lines are established, they can be used to conveniently summarize the behavior of the method within a water type, and they can aid in comparing the behavior of the method across water types. In addition, they can be used to obtain estimates of the recovery and precision at any concentration within the applicable range studied. They can also be used to predict the behavior of the method when used under similar conditions. These important relationships are discussed on the following pages.

STATEMENT OF METHOD RECOVERY

The recovery of the method is characterized by the relationship of the mean recovery (X) to the true concentration (C) of the analyte in the water sample. In order to obtain a mathematical expression for this relationship, a regression line of the form

$$X = a + b\,C \qquad (1)$$

was fitted to the data by regression techniques.

The true concentration tested covered a wide range of values. In such cases, the mean recovery statistics at the higher concentrations tend to dominate the fitted regression line producing relatively larger errors in the estimates of mean recovery at the lower concentration. To eliminate this problem, a weighted least squares technique was used to fit the mean recovery data to the true concentration values. The weighted least squares technique was performed by dividing both sides of Equation (1) by C resulting in Equation (2)

$$\frac{X}{C} = a\left(\frac{1}{C}\right) + b \qquad (2)$$

The (X/C) values were regressed against the (1/C) values using ordinary least squares to obtain estimates for the values of a and b. (This is equivalent to performing a weighted least squares with weights $w = 1/C^2$; see Reference [3], page 108 for details.) Equation (2) can easily be converted to the desired relationship given by Equation (1). The intercept (b) from Equation (2) becomes the slope (b) for Equation (1) and slope (a) from equation (2) becomes the intercept (a) for Equation (1). Equation (1) can be used to calculate the percent recovery over the applicable range of concentrations used in the study.

The percent recovery is given by

$$\% \text{ Recovery} = \frac{a + bC}{C}(100) = \left(\frac{a}{C} + b\right) 100 \qquad (3)$$

If the absolute value of the ratio (a/C) is small relative to the slope (b) for concentration in the low end of the range of concentration levels used in the study, then the percent recovery can be approximated by b(100). For example, suppose the true concentration values range from 25 ug/L to 515 ug/L, the fitted line is given by $X = 0.20 + 0.85C$. The percent recovery would be approximated by 0.85 (100) = 85 percent over the specified range of 25 ug/L to 515 ug/L.

If the ratio (a/C) is not small relative to the slope (b), then the percent recovery depends upon the true concentration (C), and it must be evaluated at each concentration value within the specified range.

STATEMENT OF METHOD PRECISION

The precision of the method is characterized by the relationships between precision statistics (S and SR) and mean recovery (X). In order to obtain a mathematical expression for these relationships, regression lines of the form

$$S = d + eX \qquad (4)$$

and

$$SR = f + gX^* \tag{5}$$

were fitted to the data by regression techniques.

As discussed previously with respect to recovery, the values of X and X* often vary over a wide range. In such cases the standard deviation statistics associated with the larger mean recovery values will dominate the regression lines. This will produce relatively larger errors in the estimates of S and SR at the lower mean recovery value. Therefore, a weighted least squares technique was also used to establish the values of the parameters d, e, f and g in Equations (4) and (5). The weighted least squares technique was performed by dividing both sides of Equation (4) by X resulting in Equation (6)

$$\frac{S}{X} = d\left(\frac{1}{X}\right) + e \tag{6}$$

and dividing both sides of Equation (5) by X* resulting in Equation (7)

$$\frac{SR}{X^*} = f\left(\frac{1}{X^*}\right) + g \tag{7}$$

The (S/X) values were regressed against the (1/X) values and the (SR/X*) values were regressed against the (1/X*) values using ordinary least squares to obtain estimates for the parameters d, e, f and g.

Equations (4) and (5) were obtained from Equations (6) and (7) in a manner similar to that discussed for mean recovery. The slope (d) for Equation (6) is the intercept (d) for Equation (4), and the intercept (e) for Equation (6) is the slope (e) for Equation (4). Similarly, the slope (f) for Equation (7) is the intercept (f) for Equation (5), and the intercept (g) for Equation (7) is the slope (g) for Equation (5).

Given equations (4) and (5), the percent relative overall standard deviation and the percent relative single-analyst standard deviation are;

$$\%RSD = \left(\frac{d}{X} + e \right) (100) \qquad (8)$$

and

$$\%RSD\text{-}SR = \left(\frac{f}{X^*} + g \right) (100) \qquad (9)$$

respectively. If absolute value of the ratio (d/X) is small relative to the slope (e), then the percent relative overall standard deviation can be approximated by (100e) over the applicable range of mean recovery values. Similarly if the ratio (f/X*) is small relative to the slope (g), then the percent relative single-analyst standard deviation can be approximated by (100g) over the applicable range of mean recovery values. If the ratios (d/X) and (f/X*) are not small relative to the slopes (e) and (f), then the percent relative standard deviations depend upon the values of the mean recovery statistics X and X*, and they should be evaluated separately for each value of X and X*.

COMPARISON OF RECOVERY AND PRECISION ACROSS WATER TYPES

It is possible that the recovery and precision of this method validation study depends upon the type of water being analyzed. The summary statistics X, S and SR are calculated separately for each concentration level within each water type. They can be compared across water types in order to obtain information about the effects of water types on recovery and precision. However, the use of these summary statistics in this manner has several disadvantages. First, it is cumbersome since there are 18 mean recovery statistics (X), 18 overall precision statistics (S) and 9 single-analyst precision statistics (SR) calculated for each compound and water. Comparison of these statistics across concentration levels and across water types become unwieldy. Second, the statistical properties of this type of comparisons procedure are difficult to determine. Finally, due to variation

associated with X, S and SR, comparisons based on these statistics can lead to inconsistent conclusions about the effect of water type. For example, reagent water may produce a significantly lower value than surface water for the precision statistics S at a high concentration, but a significantly higher value for $\bar{S}$ at a low concentration.

An alternative approach, described in reference [5], was developed to test for the effects of water type. This alternative approach summarizes the average effect of water type across concentration levels rather than studying the local effects at each concentration level. If significant differences are established by this alternative technique, then the summary statistics can be used for further local analyses.

The test for the effect of water type is based on the following statistical model. If X_{ijk} denotes the measurement reported by laboratory "i", for water type "j", and ampul "k", then;

$$X_{ijk} = \beta_j \cdot C_k^{\gamma_j} \cdot L_i \cdot \varepsilon_{ijk} \qquad \begin{matrix} i = 1,2,....,n \\ j = 1,2,....,n \\ k = 1,2,....,6 \end{matrix} \qquad (10)$$

The model components β_j and γ_j are fixed parameters which determine the effect of water type "j" on the behavior of the observed measurements (X_{ijk}). The parameter C_k is the true concentration level associated with ampul "k". The model component L_i is a random factor which accounts for the systematic error associated with laboratory "i". The model component ε_{ijk} is the random factor which accounts for the within-laboratory error.

The model is designed to approximate the global behavior of the data. The multiplicative structure was chosen because of two important properties. First, it allows for a possible curvilinear relationship between the data (X_{ijk}) and the true concentration level C_k through the use of the exponent γ_j

on C_k. This makes the model more flexible in comparison to straight-line models. Second, as will be seen below, there is an inherent increasing relationship between the variability in the data and the concentration level C_k in this model. This property is important because it is typical of interlaboratory data collected under conditions where the true concentration levels vary widely.

Mean recovery is the expected value of the measurements (X_{ijk}). The expected value for the data modeled by Equation (10) is;

$$E(X_{ijk}) = \beta_j (C_k^{\gamma_j}) E[L_i (\varepsilon_{ijk})] \qquad (11)$$

Precision is related to the variability in the measurements (X_{ijk}). The variance of the data modeled by Equation (10) is

$$Var(X_{ijk}) = [\beta_j (C_k^{\gamma_j})]^2 \; Var[L_i (\varepsilon_{ijk})] \qquad (12)$$

which is an increasing function of C_k.

The effect of water type on the recovery and precision of this IMVS is determined by the values of the parameters β_j and γ_j in Equations (11) and (12). If the β_j and γ_j vary with "j" (i.e. vary across water type), then the recovery and precision of the method also vary across water type.

To determine if these parameters vary across water type and to compare their values, they must be estimated from the laboratory data using regression techniques. Equation (10) represents the basic model. However, taking natural logarithms of both sides of Equation (10), the following straight-line regression model is obtained

$$\ln X_{ijk} = \ln\beta_j + \gamma_j \ln C_k + \ln L_i + \ln \varepsilon_{ijk} \qquad (13)$$

which can be analyzed using standard linear model analysis techniques. The parameter $\ell n\, \beta_j$ is the intercept and γ_j the slope of the regression line associated with water type "j". It is assumed that $\ell n\, L_i$ is normally distributed with mean 0 and variance, σ^2_L that $\ell n\, \varepsilon_{ijk}$ is normally distributed with mean 0 and variance, σ^2_ε, and that the $(\ell n\, L_i)$ and $(\ell n\, \varepsilon_{ijk})$ terms are independent.

Based on Equation (13) the comparison of water types reduces to the comparison of straight lines. Reagent water is viewed as a control, and each of the remaining lines (for other water types and digestions) is compared directly to the line for reagent water.

Using the data on the log-log scale and regression techniques, the parameters $\ell n\, \beta_j$ (and hence β_j) and γ_j can be estimated. The estimates are then used to test the null hypothesis that there is no effect due to water type. The formal null and alternative statistical hypothesis, H_0 and H_A, are given by

$$H_0: \ell n\, \beta_j - \ell n\, \beta_1 = 0 \quad \text{and} \quad \gamma_j - \gamma_1 = 0 \qquad \text{for } j = 2,3,4$$

versus

$$H_A: \ell n\, \beta_j - \ell n\, \beta_1 \neq 0 \text{ and/or } \gamma_j - \gamma_1 \neq 0 \text{ for some } j = 2,3,4$$

The test of null hypothesis, H_0, against the alternative hypothesis, H_A, is based on an F-statistic derived from standard linear model theory. The probability of obtaining a value of an F-statistic as large as the value which was actually observed (F_{OBS}), denoted by $P(F>F_{OBS})$, is calculated under the assumption that H_0 is true. The null hypothesis H_0 is rejected in favor of H_A if $P(F>F_{OBS})$ is less than 0.05.

If H_0 is rejected, then some linear combination of the differences in $(\ell n\, \beta_j - \ell n\, \beta_1)$ and $(\gamma_j - \gamma_1)$ is statistically different from zero. However, this does not guarantee there will be a statistically significant direct effect attributable to any specific water type since the overall

F-test can be overly sensitive to minor systematic effects common to several water types. The effect due to a specific water type is judged to be statistically significant only if one of the differences ($\ell n\ \beta_j - \ell n\ \beta_1$) and/or ($\gamma_j - \gamma_1$) is statistically different from zero. This is determined by checking the simultaneous 95% confidence intervals which are constructed for each of these differences. Each true difference can be stated to lie within its respective confidence interval with 95% confidence. If zero is contained within the confidence interval then there is no evidence that the corresponding difference is significantly different from zero.

If at least one of the confidence intervals for the differences ($\ell n\ \beta_j - \ell n\ \beta_1$) or ($\gamma_j - \gamma_1$) fails to include zero, then the statistical significance of the effect due to water type has been established. However, establishment of a statistically significant effect due to water type does not necessarily mean that the effect is of practical importance. Practical importance is related to the size and interpretation of the difference.

The interpretation of the differences involves comparing the mean recovery and standard deviation of the (X_{ijk}) data for each water type to the mean recovery and standard deviation obtained for reagent water. These comparisons are made on a relative basis. The mean recovery for water type "j" is given by Equation (11). The mean recovery for water type "j" is compared to that for reagent water (j=1) on a relative basis by

$$\frac{E(X_{ijk})}{E(X_{i1k})} = \frac{\beta_j\ C_k^{\gamma_j}\ E[L_i\ (\varepsilon_{ijk})]}{\beta_1\ C_k^{\gamma_1}\ E[L_i\ (\varepsilon_{i1k})]} = \frac{\beta_j}{\beta_1}\ C_k^{(\gamma_j - \gamma_1)} \qquad (14)$$

(The ratio of the standard deviations would be equivalent to Equation (14) and therefore the interpretation of the effect on precision is the same as that for the effect on mean recovery.)

The ratio in Equation (14) is a measure of the relative difference in mean recovery between water type "j" and reagent water. It is composed of two parts (a) β_j/β_1, which is independent of the true concentration level

(i.e. the constant bias), and (b) $C_k^{(\gamma_j - \gamma_1)}$ which depends upon the true concentration level (i.e. the concentration dependent bias). If $(\gamma_j - \gamma_1)$ is zero, then the relative difference in mean recovery is just β_j/β_1 which is independent of concentration level C_k. It can then be stated that the mean recovery of water type "j" is $100(\beta_j/\beta_1)$ percent of the mean recovery for reagent water. If $(\gamma_j - \gamma_1)$ is not zero, then the mean recovery of water type "j" is $100(\beta_j/\beta_1)\, C_k^{(\gamma_j - \gamma_1)}$ percent of that for reagent water, and therefore depends upon the true concentration level C_k.

In order to illustrate these points consider the following example. Suppose that a significant F-value has been obtained, and the confidence intervals for all the differences contain zero except for water type 5. For water type 5, the point estimate for $\ell n\beta_5 - \ell n\beta_1$ is -0.38 and the confidence interval for $(\ell n\beta_5 - \ell n\beta_1)$ is (-0.69, - 0.07). The point estimate for $(\gamma_5 - \gamma_1)$ is -0.07, and the confidence interval for $\gamma_5 - \gamma_1$ is (-0.04, 0.18). In this case a statistically significant effect due to water type has been established which involves only water type 5. The practical significance of this effect is judged by considering Equation (14). The ratio of mean recoveries for water type 5 and reagent water is given by;

$$\frac{E(X_{i5k})}{E(X_{i1k})} = \frac{\beta_5}{\beta_1} C_k^{(\gamma_5 - \gamma_1)} \qquad (15)$$

and the ratio of the standard deviations is given by

$$\frac{Var(X_{i5k})}{Var(X_{i1k})} = \frac{\beta_5}{\beta_1} C_k^{(\gamma_5 - \gamma_1)} \qquad (16)$$

Since the confidence interval for $(\gamma_5 - \gamma_1)$ contains zero this difference is assumed to be insignificant and is set to zero. Therefore Equations (15) and (16) reduce to β_5/β_1. The point estimate for $(\ell n\ \beta_5 - \ell n\ \beta_1)$ was -0.38.

Therefore, the point estimate for β_5/β_1 is 0.68, and the mean recovery for water type 5 is estimated to be 68% of the mean recovery for reagent water. Similarly the standard deviation for the data for water type 5 is estimated to be 68% of the standard deviation for reagent water. Since the 95% confidence interval for $\ell n\beta_5 - \ell n\beta_1$ was (-0.69, -0.07), any value in the recovery (standard deviation) for water type 5 can be claimed to be from 50% to 93% of the mean recovery (standard deviation) for reagent water. The practical significance of the effect due to water type 5 would depend upon the importance of a mean recovery (standard deviation) observed for reagent water.

SECTION 6

RESULTS AND DISCUSSION

The objective of this study was to characterize the performance of SW-846 Method 8270/3510 in terms of recovery, overall precision, single-analyst precision and the effect of water type on recovery and precision.

The calculated mean recoveries in reagent water presented in Table 4 indicate that the data presented in this report meet the objectives outlined for this study. The pooled mean recovery for all 58 compounds, excluding 3-methylcholanthrene, was 77.9% with a standard deviation of 13.3%. Forty-four compounds had recoveries within one standard deviation of the pooled mean. The average recovery of these 44 compounds was 80.2% with a standard deviation improving to 6.3%. The small improvement in the pooled mean recovery with a large improvement in the standard deviation, 13.3% to 6.3%, illustrates how tightly the data are distributed. In fact, Figure 1 shows a near normal distribution for the data presented in Table 4.

Generally, the ground water matrix had a lower mean recovery, 73.5%, than reagent water with 77.9% and slightly more variable data with 16.6% versus 13.3%. The leachate matrix had mean recoveries comparable to reagent water with 78.9% and a standard deviation of 14.9%.

Several compounds presented problems during the study thus making their regression equations suspect. Chlorobenzilate suffered from extremely poor extraction efficiency. The standard solution for 3-methylcholanthrene apparently dehydrogenated in the methylene chloride, causing high sample recoveries. Three compounds: 7, 12-dimethylbenz(a)anthracene, a,a-dimethyl-

TABLE 4. MEAN RECOVERIES CALCULATED FROM RECOVERY REGRESSION EQUATIONS* FOR SW-846 METHOD 8270/3510, AS PERCENT OF TRUE CONCENTRATION.

Compound	Reagent Water	Ground Water	Leachate
Nitrosomethylethylamine	73.1	77.9	72.8
N-Nitrosodiethylamine	81.9	82.5	81.6
Aniline	66.1	75.4	80.8
N-Nitrosopyrrolidine	71.8	77.9	83.7
a,a-Dimethylphenethylamine	90.8	68.7	76.6
p-Chloroaniline	80.6	76.7	84.5
2-Nitroaniline	66.2	65.5	71.3
N-Nitrosodi-n-butylamine	102.3	100.4	103.4
3-Nitroaniline	86.7	80.5	88.7
2-Naphthylamine	86.3	72.2	87.7
5-Nitro-o-toluidene	83.2	79.7	93.7
p-Nitroaniline	86.7	73.7	79.0
1,2-Diphenylhydrazine	78.6	75.2	77.8
4-Aminobiphenyl	83.5	77.7	87.7
Methapyrilene	94.3	83.5	75.5
Benzidine	79.9	33.4	75.0
p-Dimethylaminoazobenzene	84.2	82.0	84.6
3,3'-Dimethylbenzidine	80.0	50.2	78.1
4,4'-Methylene bis(2-chloroaniline)	89.3	70.8	85.4
3,3'-Dimethoxybenzidine	62.3	49.1	71.0
2-Methylnaphthalene	81.6	82.9	81.3
Methylmethane sulfonate	63.3	60.3	66.9
N-Nitrosomorpholine	63.8	78.2	70.2
4-Methylphenol	76.1	91.3	81.5
2,6-Dichlorophenol	86.9	85.9	88.2

(continued)

TABLE 4 (CONTINUED). MEAN RECOVERIES CALCULATED FROM RECOVERY REGRESSION EQUATIONS FOR SW-846 METHOD 8270/3510, AS PERCENT OF TRUE CONCENTRATION.*

Compound	Reagent Water	Ground Water	Leachate
1,2,4,5-Tetrachlorobenzene	70.5	66.2	70.3
Isosafrole	82.1	81.3	86.0
Dibenzofuran	84.5	76.2	82.5
N-Nitrosodiphenylamine	92.5	96.0	96.0
Phenacetin	84.2	77.0	96.2
Pronamide	104.9	93.9	103.9
2,Acetylaminofluorene	85.7	101.0	94.3
Tris(2,3-dibromopropyl)phosphate	67.7	57.6	99.45
Benzyl alcohol	70.8	75.4	76.4
Dihydrosafrole	76.2	76.5	81.9
1,3-Dinitrobenzene	82.1	81.9	88.6
Chlorobenzilate	26.9	33.9	20.4
Kepone	80.7	42.5	77.4
2-Methylphenol	75.2	81.0	71.6
Acetophenone	82.9	83.1	79.0
N-Nitrosopiperidine	92.3	89.4	83.8
Hexachloropropene	61.5	62.5	56.6
Safrole	79.8	76.2	77.9
2,4,5-Trichlorophenol	82.7	87.1	82.9
1,4-Dinitrobenzene	83.0	82.0	83.8
Pentachlorobenzene	80.2	79.2	74.8
2,3,4,6-Tetrachlorophenol	81.4	79.2	78.2
Diphenylamine	89.1	88.5	89.5
Pentachloronitrobenzene	83.6	79.5	82.7
2-sec-butyl-4,6-dinitrophenol	78.4	80.7	80.0
7,12-Dimethylbenz(a)anthracene	51.3	37.9	57.2

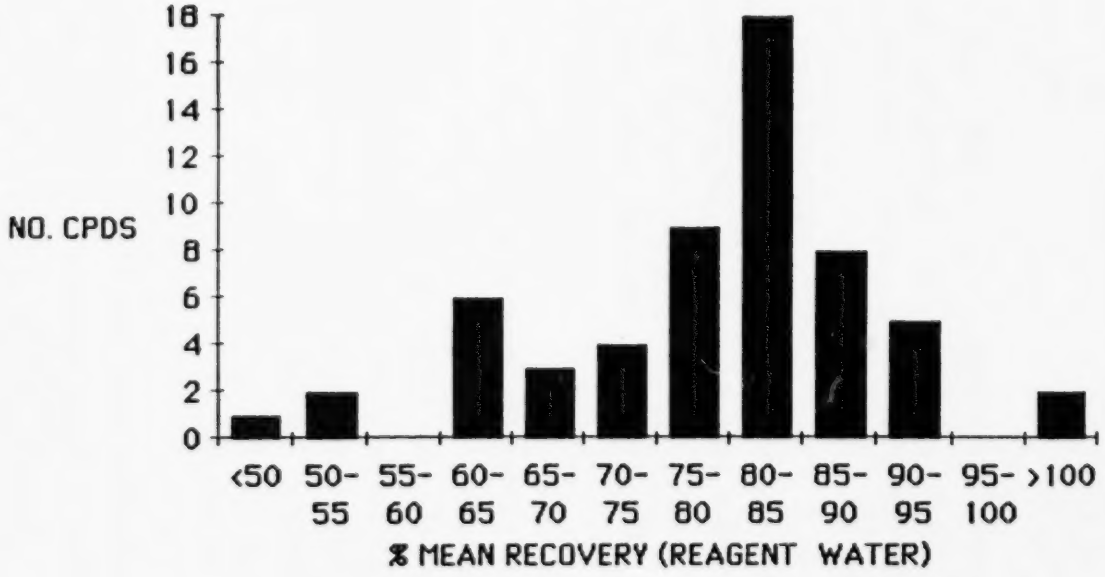
(continued)

TABLE 4 (CONTINUED). MEAN RECOVERIES CALCULATED FROM RECOVERY REGRESSION EQUATIONS FOR SW-846 METHOD 8270/3510, AS PERCENT OF TRUE CONCENTRATION.*

Compound	Reagent Water	Ground Water	Leachate
3-Methylcholanthrene	--	--	--
Dibenzo(a,e)pyrene	101.0	80.4	113.4
Ethylmethane sulfonate	80.1	90.6	80.2
1,2-Dibromo-3-chloropropane	62.4	56.2	57.4
1,2-Dinitrobenzene	86.9	81.2	84.8
1,3,5-Trinitrobenzene	54.8	40.5	49.2
Di-allate	79.1	82.1	86.2
4-Nitroquinoline-N-oxide	66.2	66.1	65.1
AVERAGE	77.92	73.55	78.93
STD DEV OF MEANS	13.31	16.63	14.86

* Percent mean recoveries were calculated from the regression equations presented in Table 1 using a value of 100 ug/L as the true concentration, C.

FIGURE 1. HISTOGRAM OF THE PERCENT RECOVERIES OF 58 SEMIVOLATILE COMPOUNDS IN REAGENT WATER USING SW-846 METHODS 8270/3510.



phenethylamine, dibenzo(a,e)pyrene and tris (2,3-dibromopropyl) phosphate suffered from poor response and erratic chromatography.

The preliminary stability studies revealed that the aromatic amines were reacting with the acetone solvent and eluting as two peaks. The main peak was the aromatic amine and the second was the reaction product. The amines were combining with the acetone and, because they were all stabilized by an aryl group, formed stable Schiff bases. The reaction is as follows:

$$-\underset{\underset{O}{\|}}{C}- + NH_2\text{-}R \longrightarrow HO\text{-}C\text{-}NHR \longrightarrow -\underset{\underset{NR}{\|}}{C}- + H_2O$$

The molecular weight (MW) of these Schiff bases was 40 g/mole higher than the starting aromatic amine. The fragmentation pattern observed in the mass spectra was the same for all Schiff base compounds, an initial loss of 41 mass units ($N{=}C\text{-}CH_3$).

To prevent this reaction from interfering with the 8270 analyses, the aromatic amines were prepared as a separate concentrate (mix 1) with methanol as the solvent. The Schiff base reaction was not found to occur in this solvent. The remaining compounds were dissolved using acetone as the solvent.

Several compounds were only available as a mixture of isomers or as impure compounds. They were: di-allate, two isomers approximately 55% and 45%; isosafrole, two isomers 80% and 20%; pronamide with two impurities at 1% and 24% with the main peak at 75%; 2,3,4,6-tetrachlorophenol 80% pure with a 20% impurity peak; tris(2,3-dibromopropyl)phosphate 62% pure with two impurity peaks at 25% and 13%.

REJECTION OF OUTLIERS

The analytical data, processed through the IMVS program, underwent three outlier tests. First, the Youden's Laboratory Ranking Procedure (1) was used

to detect and reject data having a large systematic error associated with a particular laboratory. If a laboratory reported the majority of its data for a particular compound water combination biased either high or low, compared to the other laboratories, the laboratory failed the lab ranking procedure and all of that laboratory's data were rejected for that compound water combination. Next, zero, negative and non-detected data were rejected. Finally, the Thompson outlier test (6) was used to reject individual outliers. Rejected data are identified in Appendix B, Raw Data tables by the symbol "*".

For the entire study, the IMVS computer programs rejected 17.0% or 1809 of the 10,620 data points submitted. The percentage of rejected data did not vary significantly among the three water types. Reagent water had the lowest number of rejected data 519 (4.9%), ground water had 695 (6.5%) rejected data and leachate had 595 (5.6%) rejected data.

The laboratory ranking procedure accounted for 90% of the rejected data points or 1620 out of the 1809 total number of rejected data. Thompson's individual outlier test accounted for the remaining 10% of the rejected data.

Table 5 presents the number of rejected data points for each compound in each water type. The maximum number of data points achievable for each compound is 180 (6 Youden points x 10 laboratories x 3 water types). The average number of rejected data for all 59 compounds was 30.7. The compound with the fewest number of rejected data was safrole at 6 and the compound with the highest rejected data was chlorobenzilate at 56. For purposes of this report, a compound was considered to have excessive outliers if their total number of rejected data was greater than 45 (25%). Using this guideline, only five compounds fell in this category; 2-sec-butyl-4,6-dinitrophenol (49), methapyrilene (51), tris(2,3-dibromopropyl)phosphate (51), 1,3,5-trinitrobenzene (53) and chlorobenzilate (56).

The number of rejected data by laboratory is presented in Table 6. Of the ten laboratories participating in the study, Lab 2, Lab 4, and Lab 5,

TABLE 5. NUMBER OF REJECTED DATA BY COMPOUND,BY WATER AND IN TOTAL.

Compound	Reagent Water	Ground Water	Leachate	Total
N-Nitrosomethylethylamine	14	12	18	44
N-Nitrosodiethylamine	8	0	7	15
Aniline	15	6	6	27
N-Nitrosopyrrolidine	12	11	7	30
a,a-Dimethylphenethylamine	8	18	6	32
p-Chloroaniline	9	7	12	28
2-Nitroaniline	6	6	18	30
N-Nitrosodi-n-butylamine	6	6	6	18
3-Nitroaniline	0	13	12	25
2-Naphthylamine	2	6	6	14
5-Nitro-o-toluidene	8	13	0	21
p-Nitroaniline	0	12	2	14
1,2-Diphenylhydrazine	6	4	12	22
4-Aminobiphenyl	1	2	13	16
Methapyrilene	14	26	12	52
Benzidine	9	23	9	41
p-Dimethylaminoazobenzene	6	6	12	24
3,3'-Dimethylbenzidine	14	9	12	35
4,4'-Methylene bis(2-chloroaniline)	14	12	13	39
3,3'-Dimethoxybenzidine	14	13	8	35
2-Methylnaphthalene	0	13	0	13
Methylmethane sulfonate	14	12	13	39
N-Nitrosomorpholine	13	13	12	38

(Continued)

TABLE 5 (Continued). NUMBER OF REJECTED DATA BY COMPOUND, BY WATER AND IN TOTAL.

Compound	Reagent Water	Ground Water	Leachate	Total
4-Methylphenol	12	9	7	28
2,6-Dichlorophenol	2	12	0	14
1,2,4,5-Tetrachlorobenzene	14	12	12	38
Isosafrole	7	12	12	31
Dibenzofuran	3	7	7	17
N-Nitrosodiphenylamine	1	12	6	19
Phenacetin	7	13	13	33
Pronamide	1	8	6	15
2-Acetylaminofluorene	0	14	6	20
Tris(2,3-dibromopropyl)phosphate	18	21	18	57
Benzyl alcohol	8	18	9	35
Dihydrosafrole	6	15	0	21
1,3-Dinitrobenzene	6	14	6	26
Chlorobenzilate	13	19	24	56
Kepone	7	9	18	34
2-Methylphenol	2	18	12	32
Acetophenone	0	2	12	14
N-Nitrosopiperidine	14	13	12	39
Hexachloropropene	6	13	13	32
Safrole	0	6	0	6
2,4,5-Trichlorophenol	12	13	6	31
1,4-Dinitrobenzene	12	19	12	43
Pentachlorobenzene	1	7	6	14
2,3,4,6-Tetrachlorophenol	13	12	12	37
Diphenylamine	20	8	7	35

(Continued)

TABLE 5 (Continued). NUMBER OF REJECTED DATA BY COMPOUND, BY WATER AND IN TOTAL.

Compound	Reagent Water	Ground Water	Leachate	Total
Pentachloronitrobenzene	18	12	12	42
2-sec-Butyl-4,6-dinitrophenol	18	19	12	49
7,12-Dimethylbenz(a)anthracene	10	16	13	39
3-Methylcholanthrene	14	18	14	46
Dibenzo(a,e)pyrene	18	17	10	45
Ethylmethane sulfonate	6	6	19	31
1,2-Dibromo-3-chloropropane	7	0	14	21
1,2-Dinitrobenzene	13	12	18	43
1,3,5-Trinitrobenzene	18	25	12	55
Di-allate	18	8	7	33
4-Nitroquinoline-N-oxide	1	13	12	26
Totals	519	695	595	1809

TABLE 6. NUMBER OF REJECTED DATA BY LABORATORY, BY OUTLIER TEST AND IN TOTAL.

Laboratory No.	Rank Test	Indiv Outlier	Total
001	192	25	217
002	282	15	297
003	192	11	203
004	258	24	282
005	240	22	262
006	78	5	83
007	156	40	196
008	72	18	90
009	78	13	91
010	72	16	88
Totals	1620	189	1809

accounted for 46.5% of the rejected data. Four laboratories (6,8,9,10) had 5% or less of their submitted data rejected. Laboratory 2 had the highest number of rejected data, 297, which resulted from their poor performance in the lab ranking test.

RECOVERY

The recovery was obtained by comparing the mean recovery, X, of the retained data, to the true concentrations supplied to the IMVS programs. In Appendix C the individual values for recovery are presented as percent recovery for each compound, in each water type and at each of six concentration levels. This results in 1062 separate values for recovery. Subjecting the individual recovery values within a water type to linear regression analysis yields regression equations where mean recovery, X, was related to the concentration value, C, over the entire concentration range. This reduces the separate values for recovery to 177; one value for each of 59 compounds in each of three water types. These regression equations are in the form;

$$x = mC \pm b$$

where
- x - the mean recovery (ug/L)
- C - the true concentration (ug/L)
- m - the slope of the regressed line
- b - the intercept (ug/L)

The slope of these regression equations, m, can be used as an estimate of the percent recovery of each element as long as the intercept, b, remains small relative to the slope. When the intercept is large, relative to the slope, a disproportionate recovery across the concentration range studied is implied.

The first group of compounds to be reviewed will be those with slopes, m, less than 0.65 and intercepts, b, less than 10 in reagent water. These

compounds have a uniform low recovery across all three Youden pair concentrations. The indicated source for these low recoveries would be the extraction step more than the determination step because of the uniformity of the recoveries across the concentration range. Compounds in this category are as follows:

	Mean Recovery - Reagent Water
Chlorobenzilate	X = 0.27C - 0.06
Methylmethane sulfonate	X = 0.64C - 0.71
N-Nitrosomorpholine	X = 0.65C - 1.22
Hexachloropropene	X = 0.63C - 1.51
7,12-Dimethylbenz(a)anthracene	X = 0.52C - 0.71

The next group of compounds considered are those with acceptable slopes with intercepts, b, greater than 10. An intercept greater than 10 indicates nonuniformity of recoveries across the concentration range studied and implies that the source of the variability would lie with the determinative step. Two causes attribute to these high intercepts. The first being the effect that low concentration had on recovery and the second, the effect poor chromatography had on recovery. The first group would be characterized as having fairly uniform recoveries between the high and middle Youden pair concentrations with the low Youden pair concentrations having a disproportionate recovery. These compounds experienced lower recoveries as the concentrations approached the MDL. Compounds falling into this group are

	Mean Recovery - Reagent Water
2-Acetylaminofluorene	X = 1.00C - 14.3
2-sec-Butyl-4,6-dinitrophenol	X = 0.97C - 18.6
3,3'-Dimethylbenzidine	X = 0.98C - 18.0
4,4'-Methylene bis(2-chloroaniline)	X = 1.02C - 12.7
1,2-Dibromo-3-chloropropane	X = 0.70C - 7.62

The second group is characterized as having nonproportional recoveries across all concentration levels. These effects are assumed to be the result of poor chromatography. These compounds also have large standard deviations associated with them.

	Mean Recovery - Reagent Water
Benzidine	X = 1.01C - 27.1
3,3'-Dimethoxybenzidine	X = 0.91C - 28.7
a,a-Dimethylphenethylamine	X = 1.01C - 10.2
Tris(2,3-dibronopropyl)phosphate	X = 1.04C - 36.3
Dibenzo (a,e) pyrene	X = 1.09C - 16.8
4-Nitroquinoline-N-oxide	X = 0.95C - 30.7
1,3,5-Trinitrobenzene	X = 0.64C - 9.21

All of the above compounds had poor detector response. Their lowest Youden concentration was 48 ug/L as opposed to the higher response compounds whose low Youden concentration was 10 ug/L.

3-Methylcholanthrene was purposely omitted from the discussions because the statistics generated for this compound were unusable. As stated in the "DESCRIPTION OF STUDY" section, standards were prepared and provided to the participating laboratories with the samples. These standards were dissolved in methylene chloride which was the final solvent after extraction and concentration. The 3-methylcholanthrene dehydrogenated in methylene chloride to yield a compound with a molecular weight of 266 as opposed to the original molecular weight of 268. The spectra of 3-methylcholanthrene produces a molecular ion which is also the base peak. Several laboratories used the m/e 266 ion to generate a standard curve based on the small amount of m/e 268 remaining. Their sample recoveries were, therefore, extremely high.

PRECISION

The overall and single-analyst precisions were calculated for each compound, in each water type and at each concentration level. This resulted

in 1062 individual values of overall precision and 531 individual values of single-analyst precision. These values are presented in Appendix C. Subjecting the individual precision values, within each water type, to linear regression analysis yields regression equations where the precision is related to mean recovery, $\bar{X}$, over the entire concentration range. These regressed equations are presented in Table 1. If the intercepts of these regression equations are small, relative to the mean recovery, than the slopes of these equations can be used as estimates of the overall and single-analyst percent relative standard deviations (%RSD and %RSD-SR). Tables 7 and 8 list the overall and single-analyst percent relative standard deviation assuming a mean recovery of 100 ug/L. The average %RSD for each element across all waters is entered in the column on the far right in both Tables.

The overall precision, expressed as percent relative standard deviation (%RSD) in Table 7, was 22% for reagent water. The %RSDs for leachate was 23% and for ground water was 23%. These averages did not include 3-methylcholanthrene, or chlorobenzilate.

The average %RSD-SR, single-analyst precision, found in Table 8 was 10% for reagent water, 13% for the ground water and 10% for the leachate. These lower precisions are expected since within-laboratory precision is expected to be better than between laboratory precision.

Nine compounds: a,a-dimethylphenethylamine, p-nitroaniline, methapyrilene, benzidine, tris(2,3-dibromopropyl)phosphate, chlorobenzilate, 7,12-dimethylbenz(a)anthracene, dibenzo(a,e)pyrene, and 4-nitroquinoline-N-oxide had mean overall %RSDs greater than 25% across all water types. The seven worst compounds having single-analyst %RSD-SR greater than 15% were the same compounds as in the overall precision listing with the exception of tris which had acceptable single-analyst precision.

TABLE 7. OVERALL PRECISION BY COMPOUND AND BY WATER, AS %RSD.

Compound	Reagent Water	Ground Water	Leachate	Avg
N-Nitrosomethylethylamine	23	10	9	14
N-Nitrosodiethylamine	16	9	7	11
Aniline	8	12	8	9
N-Nitrosopyrrolidine	9	17	10	12
a,a-Dimethylphenethylamine	35	37	15	29
p-Chloroaniline	14	12	12	13
2-Nitroaniline	18	18	13	16
N-Nitrosodi-n-butylamine	20	20	18	19
3-Nitroaniline	26	19	25	23
2-Naphthylamine	29	24	21	25
5-Nitro-o-toluidine	25	16	32	24
p-Nitroaniline	46	19	37	34
1,2-Diphenylhydrazine	27	25	22	25
4-Aminobiphenyl	25	23	17	22
Methapyrilene	31	20	30	27
Benzidine	42	73	47	54
p-Dimethylaminoazobenzene	22	13	15	17
3,3'-Dimethylbenzidine	21	31	18	23
4,4'-Methylene bis-(2-chloroaniline)	20	17	14	17
3,3'-Dimethoxybenzidine	20	34	22	25
2-Methylnaphthalene	15	15	18	16
Methylmethane sulfonate	9	17	15	14

TABLE 7 (CONTINUED). OVERALL PRECISION BY COMPOUND AND BY WATER, AS %RSD.

Compound	Reagent Water	Ground Water	Leachate	Avg
N-Nitrosomorpholine	14	20	26	20
4-Methylphenol	13	14	24	17
2,6-Dichlorophenol	10	14	20	15
1,2,4,5-Tetrachlorobenzene	16	13	18	16
Isosafrole	15	9	17	14
Dibenzofuran	14	11	21	15
N-Nitrosodiphenylamine	19	17	20	19
Phenacetin	21	16	23	20
Pronamide	14	17	16	16
2-Acetylaminofluorene	20	33	17	23
Tris(2,3-dibromopropyl) phosphate	33	50	74	52
Benzyl alcohol	10	13	14	12
Dihydrosafrole	17	15	25	19
1,3-Dinitrobenzene	13	17	20	17
Chlorobenzilate	80	66	57	68
Kepone	13	35	15	21
2-Methylphenol	18	12	15	15
Acetophenone	15	15	12	14
N-Nitrosopiperidine	13	13	14	13
Hexachloropropene	30	24	22	25
Safrole	16	22	16	18
2,4,5-Trichlorophenol	12	16	11	13

(Continued)

TABLE 7 (CONTINUED). OVERALL PRECISION BY COMPOUND AND BY WATER, AS %RSD.

Compound	Reagent Water	Ground Water	Leachate	Avg
1,4-Dinitrobenzene	10	11	9	10
Pentachlorobenzene	8	12	12	11
2,3,4,6-Tetrachlorophenol	9	16	11	12
Diphenylamine	13	23	14	17
Pentachloronitrobenzene	9	20	7	12
2-sec-butyl-4,6-dinitrophenol	15	20	22	19
7,12-Dimethylbenz(a)anthracene	48	53	48	50
3-Methylcholanthrene	111	92	108	104
Dibenzo(a,e)pyrene	42	37	68	49
Ethylmethane sulfonate	12	14	7	11
1,2-Dibromo-3-chloropropane	20	21	18	20
1,2-Dinitrobenzene	7	25	8	13
1,3,5-Trinitrobenzene	29	28	44	37
Di-allate	16	18	17	17
4-Nitroquinoline-N-oxide	29	30	22	27
AVERAGE	22	23	23	

TABLE 8. SINGLE-ANALYST PRECISION BY COMPOUND AND BY WATER, AS %RSD-SR.

Compound	Reagent Water	Ground Water	Leachate	Avg
N-Nitrosomethylethylamine	15	10	9	11
N-Nitrosodiethylamine	6	9	7	7
Aniline	8	12	8	9
N-Nitrosopyrrolidine	9	17	10	12
a,a-Dimethylphenethylamine	17	37	15	23
p-Chloroaniline	5	8	7	7
2-Nitroaniline	9	8	7	8
N-Nitrosodi-n-butylamine	7	12	8	9
3-Nitroaniline	8	12	8	9
2-Naphthylamine	12	14	9	12
5-Nitro-o-toluidine	9	14	9	11
p-Nitroaniline	7	13	11	10
1,2-Diphenylhydrazine	5	17	7	10
4-Aminobiphenyl	8	11	8	9
Methapyrilene	10	13	23	15
Benzidine	19	34	32	28
p-Dimethylaminoazobenzene	6	12	6	8
3,3'-Dimethylbenzidine	12	15	8	12
4,4'-Methylene bis-(2-chloroaniline)	6	9	9	8
3,3'-Dimethoxybenzidine	9	16	8	11
2-Methylnaphthalene	6	10	10	9
Methylmethane sulfonate	8	10	8	9

(Continued)

TABLE 8 (CONTINUED). SINGLE-ANALYST PRECISION BY COMPOUND AND BY WATER, AS %RSD-SR.

Compound	Reagent Water	Ground Water	Leachate	Avg
N-Nitrosomorpholine	6	9	8	8
4-Methylphenol	6	4	7	6
2,6-Dichlorophenol	5	6	6	6
1,2,4,5-Tetrachlorobenzene	10	10	7	9
Isosafrole	10	7	7	8
Dibenzofuran	9	3	7	6
N-Nitrosodiphenylamine	14	8	6	9
Phenacetin	10	7	7	8
Pronamide	10	6	7	8
2-Acetylaminofluorene	11	10	7	9
Tris(2,3-dibromopropyl) phosphate	18	5	13	12
Benzyl alcohol	5	8	6	6
Dihydrosafrole	8	9	9	9
1,3-Dinitrobenzene	9	12	5	9
Chlorobenzilate	17	9	26	17
Kepone	9	23	14	15
2-Methylphenol	9	10	5	8
Acetophenone	11	9	7	9
N-Nitrosopiperidine	7	14	12	11
Hexachloropropene	13	5	8	9
Safrole	11	14	6	10
2,4,5-Trichlorophenol	5	9	6	7

(Continued)

TABLE 8 (CONTINUED). SINGLE-ANALYST PRECISION BY COMPOUND AND BY WATER, AS %RSD-SR.

Compound	Reagent Water	Ground Water	Leachate	Avg
1,4-Dinitrobenzene	6	11	7	8
Pentachlorobenzene	5	8	5	6
2,3,4,6-Tetrachlorophenol	5	7	7	6
Diphenylamine	11	16	6	11
Pentachloronitrobenzene	13	18	7	13
2-sec-butyl-4,6-dinitrophenol	12	13	16	14
7,12-Dimethylbenz(a)anthracene	25	22	30	26
3-Methylcholanthrene	24	24	24	24
Dibenzo(a,e)pyrene	13	36	49	33
Ethylmethane sulfonate	10	10	6	9
1,2-Dibromo-3-chloropropane	12	15	6	11
1,2-Dinitrobenzene	5	14	6	8
1,3,5-Trinitrobenzene	26	22	15	21
Di-allate	10	18	7	12
4-Nitroquinoline-N-oxide	17	27	13	19
AVERAGE	10	13	10	

	%RSD	%RSD-SR
a,a-Dimethylphenethylamine	29%	23%
Benzidine	54%	28%
Tris(2,3-dibromopropyl)phosphate	52%	12%
Chlorobenzilate	68%	17%
7,12-Dimethylbenz(a)anthracene	50%	26%
Dibenz(a,e)pyrene	49%	33%
1,3,5-Trinitrobenzene	37%	21%
4-Nitroquinoline-N-oxide	27%	19%
p-Nitroaniline	34%	10%

Compounds with overall precision regression equation slopes, m, greater than 0.30 and intercepts less than 5 for reagent water are characterized as having a poor but proportional precision across all concentration levels covered in the study. These poorer precisions could be attributable to the extraction procedure more so than the determinative step. Compounds in this category are as follows.

	Overall Precision-Reagent Water
a,a-Dimethylphenethylamine	S = 0.35X + 0.96
Methapyrilene	S = 0.31X + 1.16
Benzidine	S = 0.42X + 1.36
Chlorobenzilate	S = 0.80X + 0.46
Hexachloropropene	S = 0.30X + 0.62
1,3,5-Trinitrobenzene	S = 0.29X + 3.82

The next group of compounds considered are those with overall precision slopes less than 0.30 and intercepts greater than 5 for reagent water. These compounds are characterized as having good overall precision for the high and mid level Youden pair concentrations but poorer precision at the lower Youden pair. Generally, the precision becomes more variable as the concentration approaches the MDL, but for these compounds the effect was more pronounced than for the other compounds.

	Overall Precision-Reagent Water
3,3'-Dimethoxybenzidine	S = 0.20X + 6.02
2-sec-Butyl-4,6-dinitrophenol	S = 0.15X + 6.36

Those compounds with overall precision slopes greater than 0.30 and intercepts greater than 5 for reagent water showed a general poor precision for the high and mid concentration levels with an even poorer precision for the low concentration levels. Poor performances of these compounds could be attributed to poor chromatography.

	Overall Precision-Reagent Water
p-Nitroaniline	S = 0.46X - 7.08
Tris (2,3-dibromopropyl)phosphate	S = 0.33X + 8.13
7,12-Dimethylbenz(a)anthracene	S = 0.48X + 5.74
Dibenzo(a,e)pyrene	S = 0.42X + 9.30
4-Nitroquinoline-N-oxide	S = 0.29X + 5.47

Single-analyst precision, presented in Table 8, was better than the overall laboratory precision.

Compounds which exhibited single-analyst slopes greater than 0.15 and intercepts less than 3.0 were characterized as having proportionally poor single-analyst precision. The poor precision across all concentration levels indicates a problem with the method in general and not with any specific part. The compounds falling in this category, and their regression equations, are listed below.

	Single-Analyst-Reagent Water
a,a-Dimethylphenethylamine	SR = 0.17X + 2.04
Benzidine	SR = 0.19X + 1.83
Tris(2,3-dibromopropyl)phosphate	SR = 0.18X + 1.60
Chlorobenzilate	SR = 0.17X + 0.76
7,12-Dimethylbenz(a)anthracene	SR = 0.25X - 1.71
4-Nitroquinoline-N-oxide	SR = 0.17X - 0.33

Another category of single-analyst precision compounds are those whose slopes were less than 0.15 but have intercepts greater than 3.0. These compounds are assumed to have a concentration effect when the precision was disproportionally high for the low Youden pair.

	Single Analyst-Reagent Water
p-Nitroaniline	SR = 0.07X + 7.96
3,3'-Dimethylbenzidine	SR = 0.12X + 3.26
3,3'-Dimethoxybenzidine	SR = 0.09X + 3.64
Phenacetin	SR = 0.10X + 4.21
2-Acetylaminofluorene	SR = 0.11X + 3.79
1,3-Dinitrobenzene	SR = 0.09X + 3.72
Pentachloronitrobenzene	SR = 0.13X - 4.79
Dibenzo(a,e)pyrene	SR = 0.13X + 6.01

Only one compound fell into the category of having a regressed slope greater than 0.15 and an intercept greater than 3.0. This poor single-analyst precision, coupled with disproportionate precision across Youden pairs, suggests generally poor performance by 1,3,5-trinitrobenzene, where SR = 0.26X - 5.39.

EFFECTS OF WATER TYPE

The recovery and precision point estimates across water types were subjected to an analysis of variance test to determine the effect water types had on the results. The probability of obtaining a value of an F-statistic as large as the value which was actually observed (F_{OBS}) is denoted by $P(F>F_{OBS})$ and was calculated under the assumption that the null hypothesis H_0 (no effects) was true. The null hypothesis H_0 was rejected if $P(F>F_{OBS})$ was less than 0.0500. Twenty nine compounds had $P(F>F_{OBS})$ values less than 0.0500 which implied an effect by one, or both, of the waters. All effects of water type statistical summaries are found in Appendix D. Table 9 presents the summary results of the tests for differences across water types for only those compounds where $P(F>F_{OBS})$ was less than 0.0500.

TABLE 9. EFFECTS OF WATER TYPE

Compound	$P(F>F_{OBS})$	Water Type*	Signif Intercept	Signif Slope	Practical Significance
N-Nitrosomethyl-ethylamine	0.0005	1	Yes	Yes	No
N-Nitrosodiethyl-amine	0.0340		No	No	--
Aniline	0.0089		No	No	--
N-Nitrosopyrrolidine	0.0001	1	Yes	Yes	No
a,a-Dimethylphen-ethylamine	0.0007	2	Yes	No	No
2-Nitroaniline	0.0000	1	Yes	Yes	No
2-Naphthylamine	0.0000	1	Yes	Yes	Yes
4-Aminobiphenyl	0.0000	1	Yes	Yes	No
Methapyrilene	0.0005		No	No	--
Benzidine	0.0000	1	Yes	Yes	Yes
3,3'-Dimethyl-benzidine	0.0000	1	Yes	Yes	Yes
4,4'-Methylenebis-(2-chloroaniline)	0.0000	1	Yes	Yes	Yes
3,3'-Dimethoxy-benzidine	0.0000	1	Yes	No	Yes
N-Nitrosomorpholine	0.0000	1	Yes	No	Yes
4-Methylphenol	0.0000	1	Yes	Yes	Yes
N-Nitrosodiphenyl-amine	0.0013		No	No	--
Phenacetin	0.0010		No	No	--

(continued)

TABLE 9 (Continued). EFFECTS OF WATER TYPE

Compound	$P(F>F_{OBS})$	Water Type	Signif Intercept	Signif Slope	Practical Significance
Pronamide	0.0460	1	No	Yes	Yes
Tris(2,3-dibromo-propyl)phosphate	0.0120	1	Yes	Yes	Yes
Benzyl alcohol	0.0004	1	Yes	Yes	No
1,3-Dinitrobenzene	0.0081		No	No	--
Kepone	0.0000	1	Yes	No	Yes
2-Methylphenol	0.0000	1	Yes	Yes	No
Acetophenone	0.0430	1	Yes	No	No
N-Nitrosopiperidine	0.0000	1	Yes	Yes	No
2,4,5-Trichlorophenol	0.0063	1	Yes	Yes	No
7,12-Dimethylbenz(A) anthracene	0.0100		No	No	--
Ethylmethane sulfonate	0.0000		No	No	--
1,2-Dinitrobenzene	0.0249	1	Yes	Yes	Yes

* Water Type 1 = Ground Water
Water Type 2 = Leachate

The effect due to a specific water type was judged to be statistically significant only if the 95% confidence interval constructed about the individual intercept and slope point estimates did not contain zero. However, establishment of a statistically significant effect due to water type does not necessarily mean that the effect is of practical importance. Practical importance is determined by a review of the retained data and judging whether the statistically significant effects are influenced by the retention of several errant data points or the nonuniform recovery of one Youden concentration pair. If no anomalies are observed, the statistically significant matrix effect is considered to be of practical importance.

Ten compounds had statistically significant effects due to matrix but these effects were not considered to be of practical importance. These compounds exhibited similar analyte recoveries for the four highest concentration samples (Ampuls 1,2,3,4) whether extracted from reagent water or ground water. Their overall precisions were also similar and showed no wild deviations. The two lowest sample concentrates for ground water (Ampuls 5,6), however, showed marked differences in recovery versus reagent water. The precisions of these two ampuls were also poorer than those of reagent water. The regression equations generated by the IMVS series of programs used a weighted least squares approach thus giving low concentration samples equal weight with high concentration samples. In this case, the poorer recoveries obtained for the low concentration samples from the ground water have adversely affected the statistics even though the other concentration levels showed comparable recoveries to the reagent water. Since these differences were only observed at the low end of the concentration range, the matrix effects were not deemed of practical significance. In all cases, the mean recovery, as calculated and presented in Table 4, were no more than 6% different between reagent water and ground water.

The ten compounds with statistically significant matrix effects not considered to be of practical importance are listed below.

Compound	Water Type	Recovery	%Difference
N-Nitrosomethylethylamine	Reagent Water	X = 0.75C - 1.91	
	Ground Water	X = 0.78C - 0.09	5%
N-Nitrosopyrrolidine	Reagent Water	X = 0.74C - 2.17	
	Ground Water	X = 0.78C - 0.07	6%
2-Nitroaniline	Reagent Water	X = 0.74C - 7.75	
	Ground Water	X = 0.71C - 5.54	1%
4-Aminobiphenyl	Reagent Water	X = 0.85C - 1.46	
	Ground Water	X = 0.82C - 4.30	6%
Benzyl alcohol	Reagent Water	X = 0.73C - 2.24	
	Ground Water	X = 0.74C + 1.38	5%
2-Methylphenol	Reagent Water	X = 0.77X - 1.82	
	Ground Water	X = 0.76C + 4.99	6%
Acetophenone	Reagent Water	X = 0.83C - 0.13	
	Ground Water	X = 0.81C + 2.07	0%
N-Nitrosopiperidine	Reagent Water	X = 0.93C - 0.72	
	Ground Water	X = 0.86C + 3.41	3%
2,4,5-Trichlorophenol	Reagent Water	X = 0.92C - 9.27	
	Ground Water	X = 0.87C + 0.06	4%
1,2-Dinitrobenzene	Reagent Water	X = 0.90C - 3.13	
	Ground Water	X = 0.81C + 0.24	5%

An additional compound, a,a-dimethylphenethylamine, showed a statistically significant matrix effect, but was judged to be of no practical significance. The retained data for all three waters were extremely variable. The majority of the %RSDs for all concentrations in all waters were between 50%-89%. Even the reagent water recoveries were disproportional. This extreme variability between the mean recoveries and the overall precision makes statistical inference difficult for this compound.

Finally, the remaining ten compounds, which had statistically significant

matrix effects, were found to be of practical importance. In all cases ground water was the problem water. Eight compounds had lower recoveries in the ground water matrix than in reagent water while the other two had higher recoveries. Each of the eight compounds had poorer recoveries across all concentration levels as reflected in the lower slope values of their regression equations. Also, the leachate regression equations paralleled the reagent water equations which supported the fact that the ground water matrix was indeed different from reagent water. The eight compounds with low recoveries are listed below.

Compound	Water Type	Recovery	%Difference
Naphthylamine	Reagent Water	X = 0.89C - 2.71	
	Ground Water	X = 0.77C - 4.84	14%
Benzidine	Reagent Water	X = 1.07C - 27.10	
	Ground Water	X = 0.61C - 27.60	46%
3,3'-Dimethylbenzidine	Reagent Water	X = 0.98C - 18.00	
	Ground Water	X = 0.79C - 28.75	30%
4,4'-Methylene bis (2-chloroaniline)	Reagent Water	X = 1.02C - 12.67	
	Ground Water	X = 0.88C - 17.20	18%
3,3'-Dimethoxybenzidine	Reagent Water	X = 0.91C - 28.71	
	Ground Water	X = 0.80C - 30.94	13%
Pronamide	Reagent Water	X = 1.08C - 3.09	
	Ground Water	X = 0.93C + 0.93	11%
Tris(2,3-dibromopropyl) phosphate	Reagent Water	X = 1.04C - 36.30	
	Ground Water	X = 0.74C - 16.44	10%
Kepone	Reagent Water	X = 0.86C - 5.28	
	Ground Water	X = 0.46C - 3.46	38%

N-nitrosomorpholine and 4-methylphenol exhibited higher recoveries in the ground water than in reagent water. The regression equation for N-nitrosomorpholine reveals a high slope (0.78) with a low intercept (+0.18) compared to reagent water.

Compound	Water Type	Recovery Equation
N-Nitrosomorpholine	Reagent Water	X = 0.65C - 1.22
	Ground Water	X = 0.78C + 0.18

The low intercept suggests that the increase in recovery occurred uniformly across all concentration levels indicating that the effect was matrix related.

4-Methylphenol, on the other hand, had an intercept value much different than the intercept value of the reagent water equation.

Compound	Water Type	Recovery Equation
4-Methylphenol	Reagent Water	X = 0.78C - 1.87
	Ground Water	X = 0.78C + 13.23

This difference was traced to disproportionately higher recoveries for ampuls 5 and 6 (lowest concentrations) versus reagent water. The recoveries for the other four ampuls did not vary greatly between ground water and reagent water.

		Ampul 5	Ampul 6
Reagent Water	Recovery	69.7%	68.8%
	%RSD	39.2%	26.7%
Ground Water	Recovery	142%	136%
	%RSD	35.5%	22.7%

The % RSDs are comparable, in all cases, and a review of the retained data (Appendix B) did not find the inclusion of any errant data points. The returned data for the ground water ampules 5 and 6 were higher among all labs. Because the effect was across two ampul concentrates and the variability was similar between the two matrices the effect was considered to be of practical importance.

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7. On July 24, 1986, the USEPA proposed to amend its regulations concerning ground water monitoring at landbased hazardous waste treatment, storage and disposal facilities. The amendment would require analysis of ground water for a specific list of chemicals, Appendix IX to Part 264.

APPENDIX A

INSTRUCTIONS TO PARTICIPATING LABORATORIES

APPENDIX A

LABORATORY INSTRUCTIONS

Before proceeding, make sure you have all the necessary ampul concentrates, notebooks, matrix waters and quality control samples as outlined on the packing list.

2.1 Sample Preparation

There is one ampul concentrate for each of the mixes and water types listed in TABLE 10, 54 ampuls total. Each of the ampul concentrates will be used for a 1 liter extraction, 54 sample extractions to be performed.

One matrix blank is to be extracted for each water type. There are three water types used for this study, 3 matrix blank extractions to be performed. Two of the water matrices have been provided with this study. WATER 1 is a ground water from a sanitary landfill and WATER 2 is diluted leachate from a hazardous waste landfill. CAUTION: Be extremely careful in handling these matrices. WATER 3 is to be ASTM type II laboratory pure water provided by each participating laboratory. No dilutions are required for any of the water matrices.

Stabilize the temperature of the ampuls at 20°C. When ready to begin open the ampul by snapping off the top at the break area on the neck. Transfer exactly 1.0 mL of the of the concentrate (yellow labels) in a two liter separatory funnel containing 1000 mL of the desired matrix. The sample is now ready for extraction.

Immediately transfer the remainder of the concentrate to a clean, dry flask or vial and seal. Do not expose to plastic. Store in a freezer in case future analyses are called for.

TABLE 10. STUDY 8270 SAMPLE GROUPINGS.

Water Type	Mix 1	Mix 2	Mix 3
Water 1	Amp 1	Amp 1	Amp 1
	Amp 2	Amp 2	Amp 2
	Amp 3	Amp 3	Amp 3
	Amp 4	Amp 4	Amp 4
	Amp 5	Amp 5	Amp 5
	Amp 6	Amp 6	Amp 6
Water 2	Amp 1	Amp 1	Amp 1
	Amp 2	Amp 2	Amp 2
	Amp 3	Amp 3	Amp 3
	Amp 4	Amp 4	Amp 4
	Amp 5	Amp 5	Amp 5
	Amp 6	Amp 6	Amp 6
Water 3	Amp 1	Amp 1	Amp 1
	Amp 2	Amp 2	Amp 2
	Amp 3	Amp 3	Amp 3
	Amp 4	Amp 4	Amp 4
	Amp 5	Amp 5	Amp 5
	Amp 6	Amp 6	Amp 6

The extraction procedure to follow is outlined in Method 3510 Separatory Funnel Liquid-Liquid Extraction a copy of which is enclosed. Continuous extractors are not to be used.

Extractions should be performed as a group (i.e. WATER 1, Mix 1, Amp 1-> Amp 6). A quality control sample will also be extracted with each group of six samples. Refer to section 2.4 of this booklet for QC sample preparation.

After extraction, the acid and base/neutral extracts are to be combined prior to concentration (3510 section 7.8). No extract clean up procedures are required.

2.2 Sample analysis

After the samples have been extracted and concentrated to one milliliter, 10 ul of internal standard solution (8270-Section 5.2) is spiked into the extract. The sample is now ready for analysis by GC/MS. Tables 11, 12, and 13 show internal standards with corresponding analytes assigned for quantitation and the primary quantitation ions for each compound. The daily analytical outline suggested by the EPA is a calibration curve check at the beginning and end of each series, a quality control sample extract, a matrix blank and the six sample extracts.

TABLE 11. QUANTITATION IONS FOR MIX 1 COMPOUNDS.

COMPOUND	QUANT ION	MW
1,4-DICHLOROBENZENE-D4 (INTERNAL STANDARD)	**150**	
N-NITROSOMETHYLETHYLAMINE	88	88
N-NITROSODIETHYLAMINE	120	120
ANILINE	93	93
N-NITROSOPYRROLIDINE	41	100
N-NITROSODI-N-PROPYLAMINE (QC)	70	130
NAPHTHALENE-D8 (INTERNAL STANDARD)	**136**	
A,A-DIMETHYLPHENETHYLAMINE	58	149
P-CHLOROANILINE	127	127
N-NITROSODI-N-BUTYLAMINE	84	158
2-METHYL NAPHTHALENE	142	142
ACENAPHTHENE-D10 (INTERNAL STANDARD)	**164**	
2-NITROANILINE	138	138
3-NITROANILINE	138	138
2-NAPHTHYLAMINE	143	143
5-NITRO-O-TOLUIDINE	152	152
P-NITROANILINE	138	138
1,2-DIPHENYLHYDRAZINE	77	184
PHENANTHRENE-D10 (INTERNAL STANDARD)	**188**	
4-AMINOBIPHENYL	169	169
METHAPYRILENE	58	261
BENZIDINE	184	184
2-METHYL-4,6-DINITROPHENOL (QC)	198	198
FLUORANTHENE (QC)	202	202
HEXACHLOROBENZENE (QC)	284	284
CHRYSENE-D12 (INTERNAL STANDARD)	**240**	
P-DIMETHYLAMINOAZOBENZENE	120	225
3,3'-DIMETHYLBENZIDINE	212	212
4,4'-METHYLENE BIS(2-CHLOROANILINE)	231	266
3,3'-DIMETHOXYBENZIDINE	244	244
PERYLENE-D12 (INTERNAL STANDARD)	**264**	
BENZO(B)FLUORANTHENE (QC)	252	252

The extraction procedure to follow is outlined in Method 3510 Separatory Funnel Liquid-Liquid Extraction a copy of which is enclosed. Continuous extractors are not to be used.

Extractions should be performed as a group (i.e. WATER 1, Mix 1, Amp 1-> Amp 6). A quality control sample will also be extracted with each group of six samples. Refer to section 2.4 of this booklet for QC sample preparation.

After extraction, the acid and base/neutral extracts are to be combined prior to concentration (3510 section 7.8). No extract clean up procedures are required.

2.2 Sample analysis

After the samples have been extracted and concentrated to one milliliter, 10 ul of internal standard solution (8270-Section 5.2) is spiked into the extract. The sample is now ready for analysis by GC/MS. Tables 11, 12, and 13 show internal standards with corresponding analytes assigned for quantitation and the primary quantitation ions for each compound. The daily analytical outline suggested by the EPA is a calibration curve check at the beginning and end of each series, a quality control sample extract, a matrix blank and the six sample extracts.

TABLE 12. QUANTITATION IONS FOR MIX 2 COMPOUNDS.

COMPOUND	QUANT ION	MW
1,4-DICHLOROBENZENE-D4 (INTERNAL STANDARD)	**150**	
METHYLMETHANE SULFONATE	80	110
BENZYL ALCOHOL	108	108
N-NITROSOMORPHOLINE	56	116
N-NITROSODI-N-PROPYLAMINE (QC)	70	130
NAPHTHALENE-D8 (INTERNAL STANDARD)	**164**	
4-METHYLPHENOL	108	108
2,6-DICHLOROPHENOL	162	162
DIHYDROSAFROLE	164	164
ACENAPHTHENE-D10 (INTERNAL STANDARD)	**164**	
1,2,4,5-TETRACHLOROBENZENE	216	216
ISOSAFROLE	162	162
1,3-DINITROBENZENE	168	168
DIBENZOFURAN	168	168
N-NITROSODIPHENYLAMINE	169	198
PHENANTHRENE-D10 (INTERNAL STANDARD)	**188**	
PHENACETIN	108	179
PRONAMIDE	173	255
2-METHYL-4,6-DINITROPHENOL (QC)	198	198
FLUORANTHENE (QC)	202	202
HEXACHLOROBENZENE (QC)	284	284
CHRYSENE-D12 (INTERNAL STANDARD)	**240**	
CHLOROBENZILATE	139	325
KEPONE	272	491
2-ACETYLAMINOFLUORENE	181	223
PERYLENE-D12 (INTERNAL STANDARD)	**264**	
TRIS(2,3-DIBROMOPROPYL)PHOSPHATE	39	692
BENZO(B)FLUORANTHENE (QC)	252	252

TABLE 13. QUANTITATION IONS FOR MIX 3 COMPOUNDS.

COMPOUND	QUANT ION	MW
1,4-DICHLOROBENZENE-D4 (INTERNAL STANDARD)	**150**	
2-METHYLPHENOL	108	108
ACETOPHENONE	105	120
ETHYLMETHANE SULFONATE	79	124
N-NITROSODI-N-PROPYLAMINE (QC)	70	130
NAPHTHALENE-D8 (INTERNAL STANDARD)	**136**	
N-NITROSOPIPERIDINE	42	114
HEXACHLOROPROPENE	213	248
SAFROLE	162	162
1,2-DIBROMO-3-CHLOROPROPANE	157	236
ACENAPHTHENE-D10 (INTERNAL STANDARD)	**164**	
2,4,5-TRICHLOROPHENOL	196	196
1,4-DINITROBENZENE	168	168
PENTACHLOROBENZENE	250	250
2,3,4,6-TETRACHLOROPHENOL	232	232
1,2-DINITROBENZENE	168	168
PHENANTHRENE-D10 (INTERNAL STANDARD)	**188**	
DIPHENYLAMINE	169	169
PENTACHLORONITROBENZENE	295	295
2-SEC-BUTYL-4,6-DINITROPHENOL	211	240
DI-ALLATE	86	270
1,3,5-TRINITROBENZENE	213	213
4-NITROQUINOLINE-N-OXIDE	190	190
2-METHYL-4,6-DINITROPHENOL (QC)	198	198
FLUORANTHENE (QC)	202	202
HEXACHLOROBENZENE (QC)	284	284
CHRYSENE-D12 (INTERNAL STANDARD)	**240**	
PERYLENE-D12 (INTERNAL STANDARD)	**264**	
7,12-DIMETHYLBENZ(A)ANTHRACENE	256	256
3-METHYLCHOLANTHRENE	268	268
DIBENZO(A,E)PYRENE	302	302
BENZO(B)FLUORANTHENE (QC)	252	252

This outline assumes that the calibration curve has a already been injected and initialized. Once a calibration curve has been initialized (e.g. for Mix 1 compounds) all Mix 1 extracts from the three waters should be analyzed against that curve. When completed with all Mix 1 extracts, build and initialized the next calibration curve and analyze that extracts associated with that curve.

To avoid the introduction of systematic errors due to the sampling sequence the following analytical order will be followed by each participating laboratory. The order will be the same for each mix.

	Analytical Order*		
Laboratory Code	1	2	3
1	W1	W2	W3
2	W2	W3	W1
3	W3	W1	W2
4	W1	W3	W2
5	W2	W1	W3
6	W3	W2	W1
7	W1	W2	W3
8	W2	W3	W1
9	W3	W1	W2
10	W1	W3	W2

*W1 = Water 1
W2 = Water 2
W3 = Water 3

The sample order for each day will be left up to the individual labs. Amp 1 and 2 are the high Youden pair concentrates, Amp 3 and 4 are the medium Youden pair concentrates and Amp 5 and 6 are the low Youden pair concentrates. It is generally a good practice not to introduce a low concentration sample immediately after a higher concentration sample. The possibility of sample carry over always exists.

All instrumental analyses will be performed using the columns and conditions as specified in Method 8270, section 7.0. Failure to follow the prescribed method can lead to nonpayment and/or forfeiture of your contract.

Record all raw data obtained in the laboratory notebook. This will include, but not be limited to, the following.

* Daily GC/MS tune reports.
* Calibration curves for each compound.
* Area counts vs. concentration table used to generate curves.
* Continuing calibration curve results.
* Quality control sample results.

2.3 Calibration Standards (green labels)

As stated previously, standard solutions are being supplied for this study because of the cost and availability of several of the compounds. Mix 1 standards are provided as three stock solutions that are to be combined and serially diluted. Mix 2 follows the same pattern as mix 1. Mix 3, however, contains all standards in one stock solution ready for serial dilution. Each individual standard solution will be discussed below.

Mix 1

The mix 1 standards are contained in three stock solutions labelled STOCK 1A, STOCK 1B and STOCK 1C. These three stock solutions are to be diluted in the following manner.

Stabilize the temperature of the ampuls at 20°C. When ready to begin, open the ampul by snapping off the top at the break area on the neck. Transfer exactly 1.0 mL of STOCK 1 A, 2.0 mL of STOCK 1B and 2.0 mL of STOCK 1C to a 5 mL volumetric flask. The mix 1 standard is now ready for use and contains the compounds and concentrations listed in TABLE 14. The serial dilution series recommended for the preparation of the mix 1 calibration standards is as follows.

Mix 1 Serial Dilution

		Compound Concentrations			
Solution	Dilution	Group A	Group B	Group C	QC
A	5mL	500ug/mL	600ug/mL	800ug/mL	400ug/mL
B	2mL A->5mL	200ug/mL	240ug/mL	320ug/mL	160ug/mL
C	2mL B->5mL	80ug/mL	96ug/mL	128ug/mL	64ug/mL
D	1mL C->5mL	16ug/mL	19.2ug/mL	25.6ug/mL	12.8ug/mL
	2mL D->5mL	6.4ug/mL	7.7ug/mL	10.2ug/mL	5.1ug/mL

All dilutions are to be made using methylene chloride.

Mix 2

The mix 2 standards are contained in three stock solutions labelled STOCK 2A, STOCK 2B and STOCK 2C. These three stock solutions are to be diluted in the following manner.

Stabilize the temperature of the ampuls at 20°C. When ready to begin, open the ampul by snapping off the top at the break area on the neck. Transfer exactly 1.0 mL of STOCK 2A, 2.0 mL of STOCK 2B and 2.0 mL of STOCK 2C to a 5 mL volumetric flask. The mix 2 standard is now ready for use the contains and compounds and concentrations listed in TABLE 15. The serial dilution series recommended for the preparation of the mix 2 calibration standards is as follows.

Mix 2 Serial Dilution

		Compound Concentrations			
Solution	Dilution	Group A	Group B	Group C	QC
A	5mL	500ug/mL	600ug/mL	800ug/mL	400ug/mL
B	2mL A->5mL	200ug/mL	240ug/mL	320ug/mL	160ug/mL
C	2mL B->5mL	80ug/mL	96ug/mL	128ug/mL	64ug/mL
D	1mL C->5mL	16ug/mL	19.2ug/mL	25.6ug/mL	12.8ug/mL
	2mL D->5mL	6.4ug/mL	7.7ug/mL	10.2ug/mL	5.1ug/mL

All dilutions are to be made using methylene chloride.

TABLE 14. STANDARD SOLUTION CONCENTRATIONS FOR MIX 1 COMPOUNDS.

Compound	Starting Concentration for Solution A
N-Nitrosomethylethylamine	500 ug/mL
N-Nitrosodiethylamine	500 ug/mL
Aniline	500 ug/mL
N-Nitrosopyrrolidine	500 ug/mL
N-Nitrosodi-n-butylamine	500 ug/mL
2-Naphthylamine	500 ug/mL
5-Nitro-o-toluidine	500 ug/mL
1,2-Diphenylhydrazine	500 ug/mL
4-Aminobiphenyl	500 ug/mL
Methapyrilene	500 ug/mL
p-Dimethylaminoazobenzene	500 ug/mL
2-Methylnaphthalene	500 ug/mL
a,a-Dimethylphenethylamine	600 ug/mL
p-Chloroaniline	600 ug/mL
2-Nitroaniline	600 ug/mL
3-Nitroaniline	600 ug/mL
p-Nitroaniline	800 ug/mL
Benzidine	800 ug/mL
3,3'-Dimethylbenzidine	800 ug/mL
4,4'-Methylene bis(2-chloroaniline)	800 ug/mL
3,3'-Dimethoxybenzidine	800 ug/mL
QC Compounds	
N-Nitrosodi-n-propylamine	400 ug/mL
2-Methyl-4,6-dinitrophenol	400 ug/mL
Fluoranthene	400 ug/mL
Hexachlorobenzene	400 ug/mL
Benzo(b)fluoranthene	400 ug/mL

TABLE 15. STANDARD SOLUTION CONCENTRATIONS FOR MIX 2 COMPOUNDS.

Compound	Starting Concentration for Solution A
Methylmethane sulfonate	500 ug/mL
N-Nitrosomorpholine	500 ug/mL
1,2,4,5-Tetrachlorobenzene	500 ug/mL
Isosafrole	500 ug/mL
Dibenzofuran	500 ug/mL
N-Nitrosodiphenylamine	500 ug/mL
Dihydrosafrole	500 ug/mL
Chlorobenzilate	500 ug/mL
4-Methylphenol	600 ug/mL
2,6-Dichlorophenol	600 ug/mL
Pronamide	600 ug/mL
Benzyl alcohol	600 ug/mL
Kepone	600 ug/mL
Phenacetin	800 ug/mL
2-Acetylaminofluorene	800 ug/mL
Tris(2,3-dibromopropyl)phosphate	800 ug/mL
1,3-Dinitrobenzene	800 ug/mL
QC Compounds	
N-Nitrosodi-n-propylamine	400 ug/mL
2-Methyl-4,6-dinitrophenol	400 ug/mL
Fluoranthene	400 ug/mL
Hexachlorobenzene	400 ug/mL
Benzo(b)fluoranthene	400 ug/mL

Mix 3

The mix 3 standards are contained in only one stock solution labelled STOCK 3. This stock is ready for use and contains the compounds and concentrations listed in TABLE 16. The serial dilution series recommended for the preparation of the mix 3 calibration standards is as follows.

Mix 3 Serial Dilution

		Compound Concentrations			
Solution	Dilution	Group A	Group B	Group C	QC
A	5mL	500ug/mL	600ug/mL	800ug/mL	400ug/mL
B	2mL A->5mL	200ug/mL	240ug/mL	320ug/mL	160ug/mL
C	2mL B->5mL	80ug/mL	96ug/mL	128ug/mL	64ug/mL
D	1mL C->5mL	16ug/mL	19.2ug/mL	25.6ug/mL	12.8ug/mL
	2mL D->5mL	6.4ug/mL	7.7ug/mL	10.2ug/mL	5.1ug/mL

All dilutions are to be made using methylene chloride.

Method 8270 requires a five point calibration curve for all compounds. Because of the limited sensitivities of several compounds, and the limitations imposed by the dilution series, several of the lowest concentration standards may not be found. If this situation occurs use of the four remaining calibration curves of less than four points are unacceptable.

The five quality control compounds have also been included in each of the three standard mixes. This will allow the GC/MS operator to build calibration curves for the quality control sample without having to inject an additional series of standards. The concentrations of the QC compound standards are included in each of the serial dilution tables.

TABLE 16. STANDARD SOLUTION CONCENTRATIONS FOR MIX 3 COMPOUNDS.

Compound	Starting Concentration for Solution A
Acetophenone	500 ug/mL
N-Nitrosopiperidine	500 ug/mL
Hexachloropropene	500 ug/mL
Pentachlorobenzene	500 ug/mL
Diphenylamine	500 ug/mL
Ethylmethane sulfonate	500 ug/mL
1,2-Dibromo-3-chloropropane	500 ug/mL
Di-allate	500 ug/mL
2-Methylphenol	600 ug/mL
Safrole	600 ug/mL
7,12-Dimethylbenz(a)anthracene	600 ug/mL
3-Methylcholanthrene	600 ug/mL
1,2-Dinitrobenzene	600 ug/mL
2,4,5-Trichlorophenol	800 ug/mL
1,4-Dinitrobenzene	800 ug/mL
2,3,4,5-Tetrachlorophenol	800 ug/mL
Pentachloronitrobenzene	800 ug/mL
2-sec-Butyl-4,6-dinitrophenol	800 ug/mL
Dibenzo(a,e)pyrene	800 ug/mL
1,3,5-Trinitrobenzene	800 ug/mL
4-Nitroquinoline-N-oxide	800 ug/mL
QC Compounds	
N-Nitrosodi-n-propylamine	400 ug/mL
3-Methyl-4,6-dinitrophenol	400 ug/mL
Fluoranthene	400 ug/mL
Hexachlorobenzene	400 ug/mL
Benzo(b)fluoranthene	400 ug/mL

2.4 Quality Control Samples (blue labels)

The quality control samples provided with this study contain five compounds, each at 100 ug/L. These compounds, along with their acceptance criteria, are listed below.

Compound	QC Conc(ug/L)	Acceptance Limits (ug/L)
N-Nitrosodi-n-propylamine	100	13.6 - 197.9
2-Methyl-4,6-dinitrophenol	100	53.0 - 100.0
Fluoranthene	100	42.9 - 121.3
Hexachlorobenzene	100	7.8 - 141.5
Benzo(b)fluoranthene	100	42.0 - 140.4

Preparation of the quality control sample for extraction is as follows. Stabilize the temperature of the ampuls at 20°C. When ready to begin, open the ampul by snapping off the top at the break area on the neck. Transfer exactly 1.0 mL of the concentrate to a two liter separatory funnel containing 1000 mL of ASTM Type II laboratory pure water.

Immediately transfer the remainder of the concentration to a clean, dry flask or vial and seal. Do no expose to plastic. Store in a freezer in case future analyses are called for.

Nine (9) total QC samples extractions will be required, one for each mix through each water as outlined in TABLE 10. Each participating laboratory will receive six (6) QC ampuls for the nine (9) extractions. There is approximately 2.5 mLs in each ampul.

If a QC compound falls outside of the acceptance limits defined above, this out-of-control situation must be remedied before samples can be analyzed. Close scrutiny of extraction procedures and instrument conditions will be required.

All QC results must be reported in the notebook provided, along with calibration curve, blanks and sample results, on a daily basis.

3. DATA REPORT FORMS

The data report forms for Study 8270 are included in the back of this instruction booklet. These forms have been color coded to correspond to the three mixes used in the study. Each report form is devoted to one compound so be very cautious when entering data that the proper page is being used.

Make sure your laboratory code is on each page.

All data is to be reported as micrograms per liter (ug/L) and corrected for matrix blank concentrations. In all cases, there is sufficient analyte present is each sample to make analytical data obtainable by all contractors. An analytical value MUST be reported for all samples. Contractors will not be paid for data reported as zero or less than a MDL.

All analytical data is to be right justified in the appropriate boxes. A decimal point will have its own box.

AMP 1

			1	2	.	2

The significant figure format to be used is as follows.

XXX
XX.X
X.XX
0.XX
0.0XX

At the completion of this study, return the laboratory notebook, any supplement paperwork and data report form booklet to:

Mr. Kenneth Edgell
The Bionetics Corporation
16 Triangle Park Drive
Cincinnati, Ohio 45246
(513) 771-0448

4. QUALITY CONTROL/QUALITY ASSURANCE REQUIREMENTS

Each participating laboratory will be required to implement quality control/quality assurance protocols for this study. These protocols must include, but are not limited to, the following procedures:

1. Preparation of calibration curves for each compound. Each curve will consist of five calibration standards.

2. Preparation and analysis of one matrix blank for every water group.

3. Analysis of an outside Quality Control Sample having known values. This sample is provided by the EPA and will be analyzed with each sample group each day. Use of this quality control sample is discussed in section 2.4 of this report.

4. Maintenance of accurate written records that trace all samples from receipt through preparation, analysis and final data submittal. Each contractor will be required to maintain all pertinent raw and final data until informed otherwise by EPA.

5. Maintenance of logs documenting instrument repairs or modifications performed during the time frame of this study.

APPENDIX B

RAW DATA

TABLE 17. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR N-NITROSOMETHYLETHYLAMINE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L	=	480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		415.00	309.00	89.10	69.60	8.59	6.35
21	*	178.00*	126.00*	43.30*	35.90*	4.10*	1.80*
31		392.00	297.00	90.80	68.20	9.30	6.30
41		361.00	286.00	93.10	66.80	11.40	8.54
51		399.00	314.00	84.30	62.50*	6.09	7.23
61		191.00	148.00	70.30	49.50	9.00	6.70
71		392.00	316.00	73.50	70.80	4.71	1.47
81		276.00	253.00	33.20	72.40	6.52	2.06
91	*	474.00*	424.00*	144.00*	103.00*	12.50*	7.40*
101		618.00	445.00	132.00	127.00*	6.96	5.52

RAW DATA FOR N-NITROSOMETHYLETHYLAMINE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		356.00	291.00	76.20	71.40	10.50	6.01
21	*	193.00*	146.00*	52.20*	44.40*	5.20*	4.10*
31		463.00	361.00	99.90	80.00	10.10	6.60
41		345.00	283.00	88.90	79.40	12.40	10.30
51		356.00	296.00	89.40	86.10	13.50	9.19
61		402.00	258.00	30.30	80.20	12.30	6.08
71		463.00	378.00	104.00	31.20	7.24	4.17
81		423.00	174.00	93.70	81.90	13.70	8.03
91		337.00	260.00	81.50	66.50	9.12	6.19
101	*	160.00*	134.00*	21.20*	6.87*	1.36*	2.71*

RAW DATA FOR N-NITROSOMETHYLETHYLAMINE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		344.00	237.00	70.30	54.40	6.98	4.77
21	*	188.00*	136.00*	57.40*	44.50*	5.20*	4.00*
31		400.00	314.00	84.90	73.10	9.00	5.90
41		310.00	298.00	91.30	86.70	13.80	9.61
51		321.00	263.00	65.00	55.40	6.88	5.88
61		339.00	342.00	105.00	74.30	12.50	7.34
71		429.00	320.00	92.10	66.80	4.72	2.76
81	*	615.00*	504.00*	98.10*	75.20*	10.30*	7.53*
91		426.00	321.00	90.40	75.50	8.63	5.58
101	*	189.00*	126.00*	19.40*	9.26*	0.76*	1.70*

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 18. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR N-NITROSODIETHYLAMINE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		412.00	315.00	39.80	71.20	9.96	7.10
21	*	305.00*	249.00*	81.70*	67.30*	7.20*	3.60*
31		366.00	296.00	94.10	73.70	9.90	6.60
41		395.00	389.00	104.00	90.60	13.70	8.56
51		384.00	319.00	90.30	64.60	9.91	7.10
61		203.00*	153.00	77.50	72.90	9.17	5.76
71		403.00	337.00	85.20	79.50	5.00	1.49
81		394.00	326.00	106.00	87.20	9.90	4.15
91		382.00	341.00	127.00	92.50	13.40	7.55
101		554.00*	516.00	127.00	109.00	5.44	3.79

RAW DATA FOR N-NITROSODIETHYLAMINE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		364.00	296.00	80.20	65.90	11.00	7.04
21		337.00	293.00	102.00	94.70	9.40	7.80
31		431.00	324.00	93.40	82.00	10.90	7.50
41		424.00	322.00	100.00	90.60	12.70	8.92
51		386.00	366.00	89.30	84.50	13.10	9.53
61		432.00	276.00	83.00	78.80	9.31	6.98
71		455.00	391.00	114.00	91.00	9.46	5.24
81		450.00	179.00	113.00	97.60	16.60	10.30
91		329.00	262.00	84.50	68.50	9.75	7.01
101		533.00	409.00	95.40	89.30	6.11	3.09

RAW DATA FOR N-NITROSODIETHYLAMINE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11	*	336.00*	224.00*	67.30*	53.60*	7.98*	5.74*
21		330.00	291.00	99.40	94.20	8.40	5.90
31		358.00	298.00	88.60	66.20	9.60	6.40
41		386.00	340.00	101.00	86.00	13.50	7.93
51		358.00	295.00	72.50	61.70	8.05	5.89
61		383.00	370.00	113.00	77.20	9.10	4.79
71		469.00	346.00	102.00	75.70	5.64	3.35
81		490.00	461.00	103.00	72.20	12.60	8.91
91		396.00	294.00	85.10	70.90	9.97	7.34
101		655.00*	500.00	119.00	73.80	3.05	1.89

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 10. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR ANILINE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		401.00	305.00	84.90	68.80	0.00*	0.00*
21		279.00	233.00	75.70	63.60	9.10	4.50
31		391.00	247.00	93.50	71.50	10.20	6.90
41	*	433.00*	372.00*	109.00*	81.10*	12.80*	8.89*
51		246.00	220.00	75.70	56.60	9.89	6.25
61		176.00	98.80	59.50	70.20	5.43	5.00
71		386.00	316.00	72.30	65.40	7.90	6.39
81		296.00	245.00	93.10	72.50	9.18	4.87
91	*	387.00*	352.00*	131.00*	97.70*	15.20*	8.35*
101		442.00	355.00	112.00	106.00*	7.57	4.76

RAW DATA FOR ANILINE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		375.00	322.00	80.20	72.10	3.59	1.97
21		310.00	275.00	96.40	79.10	9.50	8.10
31		341.00	291.00	89.40	85.60	11.10	7.60
41		297.00	334.00	79.70	93.40	11.60	5.11
51		279.00	274.00	87.90	74.80	12.30	9.30
61		414.00	264.00	76.20	72.50	5.86	3.51
71		415.00	349.00	97.40	77.00	9.97	8.53
81		396.00	185.00	91.30	82.40	13.10	7.57
91		328.00	258.00	89.20	70.60	11.30	7.74
101	*	486.00*	373.00*	121.00*	107.00*	11.00*	9.11*

RAW DATA FOR ANILINE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11	*	314.00*	220.00*	69.20*	52.20*	6.36*	4.90*
21		304.00	278.00	97.00	79.60	8.80	6.60
31		329.00	272.00	84.70	72.20	9.00	6.50
41		376.00	328.00	106.00	91.00	14.10	7.74
51		231.00	249.00	86.50	74.60	10.50	8.09
61		372.00	341.00	107.00	67.50	9.68	4.43
71		499.00	345.00	91.30	68.00	9.22	7.70
81		404.00	359.00	110.00	83.10	12.20	6.88
91		383.00	278.00	94.20	78.30	10.80	7.17
101		534.00	441.00	123.00	89.70	7.20	4.80

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 20. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR N-NITROSOPYRROLIDINE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED —						
11		424.00	300.00	62.20	48.60	8.10	6.15
21		190.00	156.00	77.30	57.10	7.20	3.90
31		477.00	365.00	117.00	88.30	11.40	7.30
41	*	461.00*	436.00*	124.00*	93.10*	13.40*	9.70*
51		324.00	265.00	79.00	53.50	8.28	6.97
61		185.00	153.00	70.50	75.50	8.42	5.51
71		430.00	322.00	80.90	67.20	7.28	6.67
81		400.00	317.00	100.00	74.30	5.64	1.96
91	*	589.00*	488.00*	159.00*	112.00*	13.90*	8.53*
101		484.00	361.00	96.10	93.30	4.78	2.19

RAW DATA FOR N-NITROSOPYRROLIDINE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		393.00	318.00	75.10	63.30	8.49	5.56
21		217.00	198.00	89.80	74.60	10.20	8.60
31		423.00	326.00	100.00	100.00	11.20	8.80
41		509.00	369.00	113.00	93.60	13.20	7.61
51		371.00	322.00	73.60	61.50	12.90	8.93
61		420.00	290.00	81.50	72.30	7.74	5.89
71	*	501.00*	428.00*	130.00*	100.00*	17.20*	14.10*
81		573.00	162.00	245.00*	101.00	24.00*	18.90*
91		288.00	220.00	70.30	57.50	8.65	7.59
101		554.00	414.00	104.00	42.60	0.00*	0.00*

RAW DATA FOR N-NITROSOPYRROLIDINE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11	*	370.00*	242.00*	70.10*	56.00*	6.13*	4.40*
21		198.00	197.00	84.80	69.80	8.10	6.20
31		481.00	365.00	103.00	89.00	10.80	6.60
41		473.00	372.00	125.00	92.10	12.20	7.40
51		352.00	266.00	71.40	60.90	97.00*	6.08
61		393.00	365.00	105.00	69.50	9.61	4.95
71		567.00	390.00	96.10	74.80	9.91	8.19
81		496.00	456.00	87.50	62.50	7.50	4.74
91		385.00	270.00	82.20	65.40	8.36	5.74
101		647.00	517.00	124.00	95.50	9.29	4.82

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 21. STUDY 3c, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR A,A-DIMETHYLPHENETHYLAMINE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		443.00	326.00	31.60	15.30	7.83	4.94
21		405.00	352.00	166.00	116.00	7.20	14.00
31		233.00	182.00	113.00	102.00	22.60	18.20
41		420.00	436.00	162.00	107.00	9.77	7.06
51		435.00	442.00	256.00	101.00	9.45	11.40
61	*	80.30*	5.50*	3.39*	9.16*	*	3.73*
71		515.00	443.00	242.00	88.40	5.94	15.00
81		329.00	292.00	144.00	106.00	11.90	7.00
91		544.00	506.00	219.00	172.00	17.10	14.20
101		1010.00*	963.00*	245.00	210.00	15.60	8.54

RAW DATA FOR A,A-DIMETHYLPHENETHYLAMINE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		419.00	359.00	5.98	6.33	3.61	0.79
21		19.30	408.00	155.00	144.00	18.50	13.90
31		261.00	229.00*	81.70	66.90	1.30	0.94
41		440.00	349.00	56.50	34.50	5.42	4.72
51		*	*	124.00	9.32	*	*
61		501.00	373.00	89.60	59.90	6.42	6.64
71		821.30	794.00*	181.00	116.00	7.56	11.00
81	*	18.80*	192.00*	0.22*	0.25*	0.19*	0.27*
91		602.00	345.00	105.00	93.90	16.70	14.60
101	*	749.00*	636.00*	238.00*	151.00*	27.90*	22.10*

RAW DATA FOR A,A-DIMETHYLPHENETHYLAMINE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		290.00	226.00	31.50	58.60	2.43	4.07
21		424.00	410.00	171.00	116.00	0.60	3.00
31		220.00	194.00	109.00	90.10	16.60	16.20
41		451.00	394.00	179.00	105.00	13.60	11.50
51		301.00	257.00	67.90	65.60	7.22	4.25
61		488.00	451.00	127.00	85.70	4.19	3.69
71	*	601.00*	560.00*	301.00*	216.00*	24.20*	25.40*
31		193.00	246.00	123.00	1.12	10.70	0.73
91		520.00	442.00	170.00	125.00	11.60	8.95
101		783.00	636.00	186.00	137.00	9.71	6.48

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IN = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 22. STUDY 3a, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR P-CHLOROANILINE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		436.00	336.00	115.00	85.40	0.79*	0.54*
21		352.00	312.00	141.00	106.00	16.60	12.10
31		309.00	254.00	137.00	115.00	20.30	17.90
41		408.00	391.00	139.00	103.00	17.50	12.80
51		304.00	249.00	139.00	91.00	14.30	16.90
61	*	202.00*	164.00*	104.00*	103.00*	13.40*	11.30*
71		428.00	357.00	118.00	104.00	16.40	16.30
81		322.00	273.00	132.00	106.00	18.20	12.90
91		307.00	272.00	149.00	112.00	28.00*	18.60
101		434.00	370.00	160.00	122.00	19.90	15.10

RAW DATA FOR P-CHLOROANILINE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		331.00	302.00	93.20	73.80	4.11	5.27
21		345.00	308.00	153.00	115.00	21.50	19.40
31		290.00	241.00	139.00	120.00	23.20	19.40
41		468.00	352.00	144.00	116.00	23.00	17.80
51		325.00	271.00	129.00	82.30	19.00	17.30
61		433.00	302.00	110.00	86.20	9.00	8.97
71	*	523.00*	419.00*	165.00*	117.00*	23.90*	21.80*
81		336.00	154.00*	116.00	97.60	19.90	12.90
91		328.00	279.00	122.00	90.20	18.50	15.50
101		367.00	302.00	146.00	114.00	16.30	14.00

RAW DATA FOR P-CHLOROANILINE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11	*	354.00*	263.00*	102.00*	69.10*	10.30*	8.98*
21		386.00	330.00	163.00	130.00	19.60	16.90
31		341.00	292.00	135.00	114.00	21.10	18.50
41		432.00	351.00	154.00	103.00	19.20	14.00
51	*	297.00*	236.00*	94.60*	85.10*	15.80*	14.90*
61		422.00	396.00	145.00	94.40	16.20	11.00
71		531.00	406.00	142.00	102.00	19.60	18.30
81		358.00	309.00	141.00	97.20	21.70	15.70
91		361.00	299.00	120.00	95.80	19.90	16.30
101		363.00	306.00	141.00	105.00	17.80	14.40

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 23. STUDY 76, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 2-NITROANILINE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		347.00	321.00	85.70	68.80	10.30	7.11
21		349.00	245.00	90.90	71.00	9.00	5.00
31		313.00	279.00	104.00	91.00	10.50	7.80
41		410.00	421.00	111.00	96.50	11.70	8.36
51		360.00	292.00	115.00	68.20	12.10	8.91
61		214.00	172.00	83.60	76.80	9.17	5.92
71		441.00	365.00	104.00	92.70	9.41	5.35
81		281.00	257.00	95.70	77.90	9.46	5.20
91	*	403.00*	341.00*	143.00*	107.00*	14.90*	9.29*
101		462.00	383.00	104.00	91.70	11.30	9.31

RAW DATA FOR 2-NITROANILINE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		374.00	304.00	80.10	67.80	9.92	8.13
21		295.00	252.00	95.50	76.60	10.10	7.60
31		265.00	259.00	94.60	85.80	11.30	8.20
41		462.00	343.00	106.00	91.50	13.00	9.12
51		374.00	314.00	100.00	81.20	12.80	10.10
61		468.00	308.00	92.30	81.50	9.49	8.63
71	*	522.00*	423.00*	149.00*	112.00*	15.00*	10.60*
81		311.00	129.00	90.40	80.70	12.70	8.50
91		272.00	238.00	93.90	74.50	11.80	8.58
101		454.00	394.00	110.00	88.80	12.90	8.58

RAW DATA FOR 2-NITROANILINE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11	*	267.00*	246.00*	74.60*	53.90*	7.81*	5.58*
21		424.00	300.00	136.00	97.60	9.00	6.60
31		336.00	264.00	91.70	76.40	10.70	7.50
41		429.00	352.00	116.00	88.90	12.00	7.48
51	*	312.00*	269.00*	68.60*	63.20*	8.93*	6.60*
61		425.00	379.00	116.00	71.60	10.20	6.03
71		520.00	426.00	116.00	95.40	11.30	6.98
81		361.00	302.00	106.00	72.80	11.40	7.78
91		373.00	261.00	98.70	79.30	12.30	8.41
101	*	463.00*	360.00*	122.00*	93.00*	15.00*	9.13*

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 24. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR N-NITROSODI-N-BUTYLAMINE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED =						
11		422.00	329.00	120.00	85.60	13.20	9.32
21	*	283.00*	236.00*	113.00*	92.20*	13.70*	10.30*
31		273.00	271.00	141.00	113.00	23.70	17.50
41		473.00	433.00	178.00	137.00	16.10	10.20
51		397.00	323.00	137.00	92.00	13.70	17.00
61		227.00	186.00	122.00	119.00	17.10	11.70
71		494.00	395.00	145.00	110.00	10.40	12.10
81		375.00	303.00	134.00	111.00	19.50	15.30
91		443.00	410.00	169.00	128.00	24.00	15.60
101		457.00	413.00	157.00	115.00	18.60	15.10

RAW DATA FOR N-NITROSODI-N-BUTYLAMINE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		369.00	313.00	117.00	95.00	17.20	15.40
21		305.00	241.00	117.00	92.40	18.00	16.00
31	*	217.00*	208.00*	93.00*	90.60*	15.70*	12.40*
41		547.00	423.00	163.00	127.00	18.90	13.50
51		520.00	295.00	131.00	86.30	20.40	19.00
61		451.00	326.00	111.00	93.40	13.10	10.90
71		624.00	494.00	147.00	110.00	16.60	16.30
81		439.00	196.00	167.00	109.00	24.50	19.80
91		369.00	313.00	123.00	95.80	18.10	15.60
101		420.00	393.00	134.00	113.00	17.30	15.40

RAW DATA FOR N-NITROSODI-N-BUTYLAMINE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11	*	360.00*	255.00*	104.00*	73.20*	13.30*	10.50*
21		306.00	275.00	140.00	99.90	15.00	12.40
31		314.00	304.00	134.00	103.00	20.50	17.60
41		502.00	424.00	190.00	126.00	16.30	11.10
51		337.00	283.00	90.80	75.00	13.40	14.00
61		478.00	424.00	148.00	103.00	15.50	9.90
71		423.00	379.00	169.00	115.00	15.40	14.40
81		427.00	376.00	141.00	114.00	20.80	17.50
91		465.00	429.00	126.00	93.90	19.20	16.00
101		520.00	389.00	187.00	109.00	16.20	14.60

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 25. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 3-NITROANILINE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		412.00	314.00	119.00	93.20	5.18	3.09
21		402.00	329.00	144.00	102.00	17.60	13.50
31		249.00	234.00	130.00	108.00	23.40	18.40
41		586.00	576.00	213.00	157.00	12.60	9.17
51		374.00	310.00	125.00	75.30	13.50	16.20
61		194.00	183.00	109.00	109.00	15.70	11.70
71		551.00	413.00	146.00	105.00	13.90	22.40
81		391.00	335.00	124.00	112.00	17.10	12.30
91		544.00	479.00	188.00	127.00	24.90	15.80
101		438.00	416.00	148.00	116.00	15.60	12.20

RAW DATA FOR 3-NITROANILINE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		376.00	325.00	120.00	92.70	6.98	8.19
21		379.00	300.00	122.00	100.00	17.50	17.20
31	*	174.00*	155.00*	67.60*	73.90*	12.00*	8.00*
41		641.00*	536.00	195.00	140.00	19.30	11.80
51		380.00	270.00	126.00	75.50	17.00	15.30
61		398.00	288.00	92.90	89.60	8.51	7.14
71	*	688.00*	497.00*	140.00*	108.00*	20.10*	24.00*
81		451.00	342.00	151.00	106.00	20.30	14.00
91		418.00	349.00	129.00	99.00	17.70	14.70
101		461.00	416.00	136.00	100.00	11.10	8.49

RAW DATA FOR 3-NITROANILINE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11	*	288.00*	252.00*	106.00*	74.70*	9.84*	9.19*
21	*	465.00*	421.00*	175.00*	123.00*	20.60*	17.80*
31		235.00	258.00	129.00	94.70	19.50	16.00
41		653.00	531.00	226.00	159.00	17.30	9.20
51		320.00	277.00	90.50	64.40	12.10	12.30
61		476.00	433.00	145.00	105.00	15.80	10.20
71		402.00	394.00	173.00	117.00	20.60	22.20
81		441.00	376.00	144.00	112.00	19.50	15.10
91		531.00	411.00	131.00	96.10	18.90	14.80
101		481.00	335.00	153.00	87.80	12.40	10.10

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 26. STUDY 35, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 2-NAPHTHYLAMINE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		547.00	471.00	89.40	46.40	0.00*	0.00*
21		321.00	275.00	112.00	87.20	10.50	6.30
31		195.00	189.00	89.60	92.70	14.10	8.50
41		532.00	523.00	144.00	107.00	10.20	5.24
51		343.00	294.00	95.60	41.90	4.79	6.35
61		222.00	189.00	51.90	81.40	3.96	4.03
71		521.00	419.00	125.00	91.40	8.27	9.74
81		429.00	291.00	119.00	93.20	9.18	5.57
91		464.00	396.00	163.00	114.00	17.80	3.24
101		432.00	354.00	110.00	91.40	6.98	3.81

RAW DATA FOR 2-NAPHTHYLAMINE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		495.00	425.00	82.10	54.70	0.02	0.02
21		326.00	290.00	97.00	86.60	8.70	6.30
31		157.00	136.00	56.80	57.70	6.20	3.50
41	*	564.00*	445.00*	119.00*	95.40*	9.02*	3.91*
51		337.00	254.00	88.60	32.50	5.58	2.66
61		463.00	335.00	74.20	65.90	2.17	1.63
71		582.00	426.00	95.90	73.50	7.37	8.91
81		432.00	186.00	103.00	71.30	5.96	1.69
91		377.00	321.00	85.00	71.00	6.43	3.76
101		454.00	406.00	96.80	63.40	0.16	0.07

RAW DATA FOR 2-NAPHTHYLAMINE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		636.00	416.00	107.00	73.20	4.09	3.62
21		353.00	322.00	135.00	109.00	10.20	7.40
31		231.00	201.00	95.40	75.90	10.90	8.00
41	*	602.00*	461.00*	151.00*	110.00*	10.30*	5.94*
51		315.00	291.00	71.50	55.70	6.76	5.03
61		493.00	427.00	110.00	80.70	7.84	4.50
71		430.00	410.00	138.00	103.00	13.60	12.00
81		413.00	383.00	121.00	91.40	9.24	4.29
91		525.00	411.00	116.00	57.30	9.21	3.76
101		471.00	312.00	116.00	73.20	3.10	2.40

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 27. STUDY 30, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 5-NITRO-O-TOLUIDINE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		379.00	312.00	85.70	65.90	5.30	2.95
21		378.00	296.00	109.00	80.20	11.20	6.90
31		215.00	198.00	87.10	85.40	13.50	9.10
41		658.00	511.00	175.00*	139.00*	11.40	5.44
51		365.00	304.00	95.10	56.50	8.08	7.44
61		214.00	198.00	89.90	99.90	11.00	5.65
71		580.00	404.00	117.00	84.80	7.69	11.00
81		422.00	333.00	109.00	97.90	10.20	5.47
91	*	591.00*	530.00*	159.00*	108.00*	14.20*	7.28*
101		469.00	384.00	112.00	94.70	9.01	4.12

RAW DATA FOR 5-NITRO-O-TOLUIDINE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		374.00	295.00	87.40	70.60	6.60	5.53
21		339.00	274.00	87.10	77.70	9.70	8.20
31	*	156.00*	131.00*	46.70*	54.30*	6.30*	3.40*
41	*	715.00*	550.00*	152.10*	112.00*	11.70*	5.29*
51		389.00	235.00	92.70	60.80	10.90	7.19
61		441.00	312.00	74.10	72.70	6.95	3.81
71		635.00*	473.00	104.00	85.50	10.30	11.90
81		509.00	196.00	122.00	97.10	12.00	7.50
91		381.00	322.00	95.90	78.00	9.62	6.96
101		440.00	407.00	99.70	80.20	6.62	3.72

RAW DATA FOR 5-NITRO-O-TOLUIDINE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		379.00	253.00	77.40	59.70	7.17	5.09
21		389.00	372.00	130.00	98.80	12.30	8.70
31		242.00	228.00	89.50	73.20	11.40	8.70
41		722.00	571.00	184.00	141.00	10.90	4.59
51		315.00	239.00	87.10	90.00	7.39	6.12
61		482.00	421.00	108.00	85.10	9.21	5.32
71		394.00	385.00	132.00	96.00	10.70	10.30
81		404.00	368.00	142.00	125.00	15.40	9.66
91		632.00	573.00	134.00	103.00	13.20	7.99
101		463.00	309.00	113.00	86.60	5.48	3.49

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 28. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR P-NITROANILINE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11		464.00	355.00	150.00	121.00	31.90	24.10
21		375.00	271.00	158.00	118.00	54.40	33.20
31		202.00	171.00	141.00	130.00	67.20	45.90
41		748.00	704.00	350.00	247.00	49.10	22.50
51		356.00	304.00	153.00	89.80	35.10	34.00
61		180.00	179.00	130.00	116.00	47.40	26.20
71		516.00	376.00	172.00	124.00	36.70	57.40
81		138.00	151.00	220.00	195.00	73.40	44.10
91		452.00	443.00	289.00	195.00	74.50	42.70
101		537.00	486.00	227.00	194.00	55.50	39.00

RAW DATA FOR P-NITROANILINE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11		362.00	339.00	122.00	102.00	26.50	21.60
21		295.00	235.00	126.00	112.00	39.60	37.00
31	*	129.00*	111.00*	63.20*	74.40*	26.50*	13.10*
41	*	689.00*	530.00*	297.00*	226.00*	67.50*	26.50*
51		364.00	241.00	133.00	79.60	51.50	39.00
61		421.00	298.00	109.00	106.00	28.10	18.20
71		532.00	412.00	148.00	116.00	45.10	50.30
81		439.00	185.00	206.00	139.00	60.10	41.90
91		427.00	355.00	162.00	134.00	50.70	37.90
101		456.00	455.00	170.00	128.00	41.10	23.60

RAW DATA FOR P-NITROANILINE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11		419.00	273.00	140.00	109.00	33.50	26.90
21		431.00	361.00	193.00	154.00	60.90	48.20
31		211.00	212.00	157.00	124.00	54.10	39.50
41		817.00	745.00	397.00*	230.00*	69.10	25.50
51		306.00	297.00	99.50	69.90	30.50	26.10
61		455.00	400.00	157.00	130.00	41.20	23.80
71		379.00	346.00	192.00	142.00	51.00	45.20
81		152.00	108.00	169.00	150.00	59.90	37.10
91		546.00	477.00	174.00	135.00	52.60	36.70
101		521.00	222.00	199.00	110.00	38.30	27.60

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 29. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 1,2-DIPHENYLHYDRAZINE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		370.00	292.00	92.70	70.40	10.70	7.23
21		178.00	156.00	88.70	79.40	12.90	8.60
31		139.00	187.00	93.70	80.30	15.10	10.60
41		513.00	471.00	136.00	113.00	14.30	9.47
51		302.00	246.00	89.60	62.60	8.68	6.70
61		233.00	179.00	87.00	83.60	11.00	5.96
71		404.00	316.00	103.00	82.80	10.50	8.17
81		368.00	322.00	110.00	96.80	15.10	11.10
91	*	566.00*	520.00*	178.00*	109.00*	16.10*	8.83*
101		337.00	326.00	114.00	95.90	12.90	8.94

RAW DATA FOR 1,2-DIPHENYLHYDRAZINE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		346.00	288.00	89.60	74.90	9.84	7.32
21		37.20	178.00	33.20	73.00	11.40	8.90
31		186.00	168.00	79.20	71.80	11.40	7.30
41		537.00	404.00	109.00	85.70	12.00	7.44
51		309.00	278.00	96.10	70.80	13.00	8.97
61		433.00	326.00	90.20	79.60	9.29	6.78
71		520.00	379.00	109.00	82.60	11.60	9.51
81		438.00	153.00	155.00*	111.00*	20.80*	14.10*
91		307.00	273.00	84.50	70.40	10.40	7.44
101		359.00	306.00	100.00	93.70	14.10	9.61

RAW DATA FOR 1,2-DIPHENYLHYDRAZINE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11	*	311.00*	225.00*	75.40*	57.10*	8.11*	6.13*
21		196.00	176.00	97.60	85.80	14.50	11.00
31		213.00	202.00	86.90	76.30	12.90	9.10
41	*	526.00*	394.00*	127.00*	101.00*	14.00*	8.55*
51		255.00	257.00	76.60	67.10	9.95	7.99
61		470.00	421.00	114.00	99.40	11.10	6.49
71		401.00	369.00	111.00	85.80	11.00	8.40
81		286.00	284.00	109.00	93.30	13.60	10.20
91		432.00	373.00	99.30	79.40	12.00	8.52
101		319.00	313.00	121.00	90.30	13.60	11.00

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 30. STUDY 76, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 4-AMINOBIPHENYL IN REAGENT WATER

INCREMENT IN UG/L		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
LAB/AN	LAB REJECTED	480.00	400.00	120.00	96.00	13.40	9.60
11		632.00	306.00	121.00	84.10	1.75	
21		234.00	207.00	105.00	98.10	11.30	1.24
31		249.00	216.00	84.20	76.30	12.40	6.40
41		476.00	452.00	126.00	103.00	10.30	9.60
51		341.00	293.00	89.10	89.50	7.31	9.20
61		229.00	192.00	71.90	93.70	7.79	6.27
71		372.00	326.00	112.00	33.50	17.80	5.60
81		434.00	337.00	111.00	93.40	13.00	18.90*
91		321.00	262.00	120.00	103.00	17.00	7.21
101		399.00	318.00	116.00	95.10	9.96	8.14
							4.72

RAW DATA FOR 4-AMINOBIPHENYL IN GROUND WATER

INCREMENT IN UG/L		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
LAB/AN	LAB REJECTED	480.00	400.00	120.00	96.00	13.60	9.60
11		518.00	464.00	110.00	79.60	0.82	
21		302.00	272.00	115.00	93.20	10.70	0.87
31		245.70	214.00	73.90	65.90	8.30	7.30
41		327.00	398.00	113.00	91.40	10.00	6.40
51		296.00	226.00	80.00	62.80	6.65	6.07
61		479.00	328.00	71.30	93.20	6.47	3.67
71		354.00	322.00	122.00	92.40	21.60*	6.74
81		449.00	211.00	106.00	95.50	6.98	22.20*
91		336.00	291.00	89.70	73.70	7.44	2.64
101		403.00	361.00	99.90	81.60	9.74	4.87
							1.65

RAW DATA FOR 4-AMINOBIPHENYL IN LEACHATE

INCREMENT IN UG/L		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
LAB/AN	LAB REJECTED	480.00	400.00	120.00	96.00	13.60	9.60
11		479.00	396.00	107.00	76.00	7.21	6.11
21		256.00	239.00	121.00	117.00	11.20	8.30
31		307.00	256.00	106.00	85.90	14.00	10.00
41		525.00*	431.00*	149.00*	110.00*	12.10*	7.14*
51	*	307.00*	224.00*	63.00*	44.70*	5.60*	4.67*
61	*	487.00	420.00	129.00	97.30	9.93	5.22
71		443.00	317.00	114.00	98.40	22.10	20.40*
81		380.00	304.00	110.00	95.30	12.90	6.67
91		353.00	285.00	99.90	91.60	11.20	6.95
101		503.00	390.00	132.00	93.90	5.96	3.90

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN
CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 30. STUDY 76, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 4-AMINOBIPHENYL IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		632.00	504.00	121.00	84.10	1.75	1.24
21		234.00	207.00	105.00	98.10	11.30	6.40
31		249.00	214.00	84.20	76.30	12.40	9.20
41		476.00	452.00	124.00	103.00	10.30	6.30
51		341.00	293.00	89.10	59.50	7.21	6.27
61		229.00	192.00	71.90	93.70	7.78	5.60
71		372.00	324.00	112.00	83.50	17.80	18.00*
81		434.00	337.00	111.00	93.40	13.00	7.21
91		321.00	262.00	120.00	103.00	17.00	8.14
101		399.00	318.00	116.00	95.10	9.96	4.72

RAW DATA FOR 4-AMINOBIPHENYL IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		518.00	464.00	110.00	79.60	0.82	0.87
21		302.00	272.00	115.00	98.20	10.70	7.90
31		245.00	214.00	73.90	65.90	8.30	4.40
41		325.00	388.00	113.00	91.40	10.00	4.61
51		296.00	226.00	80.00	42.80	6.65	3.47
61		479.00	328.00	71.30	65.20	4.47	2.76
71		334.00	322.00	122.00	92.40	21.60*	22.20*
81		448.00	211.00	106.00	85.50	6.98	2.64
91		336.00	291.00	89.70	73.70	7.44	4.87
101		403.00	361.00	99.10	61.80	3.74	1.65

RAW DATA FOR 4-AMINOBIPHENYL IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		479.00	396.00	107.00	76.00	7.21	6.11
21		254.00	229.00	121.00	107.00	11.20	8.30
31		307.00	266.00	104.00	85.90	14.00	10.00
41	*	525.00*	431.00*	145.00*	110.00*	12.10*	7.14*
51	*	307.00*	224.00*	63.30*	44.70*	5.60*	4.67*
61		487.00	420.00	129.00	97.30	9.93	5.22
71		443.00	317.00	114.00	98.40	22.10	20.40*
81		380.00	304.00	110.00	95.30	12.90	6.67
91		353.00	285.00	99.90	91.60	11.20	6.95
101		503.00	390.00	132.00	93.90	5.96	3.90

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 31. STUDY 36/SW 846 METHOD 8270/SEMI-VOLATILES/GC-MS

RAW DATA FOR METHAPYRILENE IN REAGENT WATER

	AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L	480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED					
11		573.00	436.00	99.90	75.40	4.78	2.74
21		201.00	194.00	83.40	65.50	5.30	2.70
31		315.00	248.00	94.70	89.20	12.00	8.00
41	*	998.00*	1130.00*	271.00*	220.00*	15.50*	6.51*
51		438.00	373.00	97.20	61.20	3.33	3.05
61	*	134.00*	5.19*	27.60*	59.90*	2.72*	3.47*
71		506.00	457.00	210.00	134.00	*	*
81		420.00	333.00	114.00	85.60	8.02	2.07
91		550.00	417.00	180.00	123.00	14.90	6.11
101		627.00	491.00	134.00	110.00	7.18	2.49*

RAW DATA FOR METHAPYRILENE IN GROUND WATER

	AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L	480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED					
11		513.00	424.00	109.00	91.70	11.50	8.22
21	*	83.20*	236.00*	63.70*	45.60*	5.20*	4.50*
31		329.00	279.00	95.10	78.50	13.00	6.70
41	*	1100.00*	956.00*	277.00*	214.00*	25.50*	18.40*
51	*	50.30*	39.10*	72.30*	32.20*	7.60*	5.01*
61		544.00	386.00	94.60	94.80	8.33	5.37
71	*	468.00*	471.00*	250.00*	196.00*	37.60*	42.90*
81		252.00	221.00	68.50*	36.60*	10.20	5.24
91		317.00	275.00	84.10	76.40	11.50	8.17
101		357.00	503.00	113.00	88.20	9.64	5.17

RAW DATA FOR METHAPYRILENE IN LEACHATE

	AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L	480.00	400.00	120.00	96.00	17.60	9.60
LAB/AN	LAB REJECTED					
11		442.00	323.00	91.00	58.50	3.91	2.81
21		212.00	190.00	85.70	70.70	7.20	2.50
31		353.00	290.00	104.00	79.00	17.60	8.10
41	*	1320.00*	1160.00*	323.00*	213.00*	15.30*	6.37*
51		331.00	326.00	70.90	77.80	1.33	1.26
61		355.00	236.00	133.00	70.10	5.06	3.10
71	*	592.00*	487.00*	236.00*	199.00*	*	*
81		460.00	415.00	107.00	1.70	3.89	1.21
91		396.00	250.00	108.00	91.30	11.60	6.68*
101		577.00	379.00	127.00	75.20	2.76	0.00*

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UG = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 32. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR BENZIDINE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11		197.00	49.30	428.00	601.00*	67.40	64.80*
21		269.00	259.00	160.00	136.00	47.70	29.20
31		205.00	167.00	112.00	95.20	43.70	28.10
41		628.00	725.00	342.00	140.00	45.20	27.20
51		490.00	429.00	157.00	66.40	15.60	8.81
61	*	67.70*	0.36*	0.78*	74.80*	3.24*	22.90*
71		515.00	489.00	301.00	219.00	52.80	96.90*
81		577.00	444.00	208.00	171.00	43.70	25.00
91		555.00	419.00	222.00	163.00	34.30	9.95
101		495.00	348.00	176.00	139.00	39.90	25.30

RAW DATA FOR BENZIDINE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11	*	10800.00*	8010.00*	1290.00*	260.00*	8.22*	6.60*
21		37.20	330.00	126.00	123.00	28.90	17.30*
31		182.00	126.00	63.40	40.00	10.80	2.90
41		500.00	323.00	211.00	147.00	11.40	2.55
51		33.40	24.20	52.90	*	7.36	0.58
61		374.00	248.00	53.80	38.70	0.75	4.08
71	*	516.00*	514.00*	279.00*	207.00*	63.70*	103.00*
81	*	19.10*	137.00*	1.40*	1.20*	1.22*	0.50*
91		337.00	300.00	89.60	83.80	3.18	2.11
101		311.00	916.00*	44.90	9.18	0.00*	0.00*

RAW DATA FOR BENZIDINE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11	*	3340.00*	1840.00*	560.00*	528.00*	112.00*	97.60*
21		249.00	273.00	156.00	78.40	0.00*	1.30
31		232.00	215.00	125.00	102.00	46.90	37.40
41		673.00	622.00*	461.00	240.00	73.90	23.70
51		340.00	305.00	78.90	51.90	15.50	5.40
61		573.00	426.00	181.00	91.80	35.20	17.90
71		656.00	509.00	293.00	240.00	122.00	117.00*
81		287.00	274.00	129.00	3.40	21.60	0.13
91		562.00	354.00	179.00	140.00	25.90	5.65
101		850.00	250.00	257.00	119.00	56.50	30.10

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 33. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR P-DIMETHYLAMINOAZOBENZENE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		429.00	328.00	90.10	70.40	9.54	6.64
21		346.00	317.00	124.00	112.00	11.40	7.40
31		345.00	319.00	104.00	91.30	12.10	8.90
41		450.00	403.00	107.00	96.30	7.96	4.75
51		372.00	271.00	89.10	67.40	6.90	7.20
61		267.00	205.00	91.10	86.60	8.93	4.67
71		430.00	350.00	105.00	83.40	7.53	6.23
81		293.00	280.00	89.20	73.70	10.40	6.61
91	*	819.00*	490.00*	160.00*	109.00*	20.40*	9.76*
101		577.00	480.00	144.00	115.00	11.10	6.9*

RAW DATA FOR P-DIMETHYLAMINOAZOBENZENE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		333.00	314.00	84.40	74.80	10.10	6.77
21	*	478.00*	388.00*	159.00*	114.00*	13.10*	9.10*
31		366.00	320.00	103.00	89.10	10.50	6.50
41		501.00	315.00	84.00	75.00	8.03	5.05
51		399.00	273.00	94.90	71.10	12.10	8.17
61		500.00	332.00	93.40	87.30	9.26	6.56
71		423.00	340.00	115.00	92.40	10.30	8.79
81		529.00	246.00	131.00	96.20	14.10	10.10
91		348.00	279.00	87.70	69.30	9.64	6.69
101		359.00	286.00	94.30	74.10	7.14	3.79

RAW DATA FOR P-DIMETHYLAMINOAZOBENZENE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		371.00	252.00	81.20	57.30	8.27	6.47
21	*	395.00*	357.00*	145.00*	127.00*	14.00*	10.30*
31		406.00	300.00	105.00	87.20	12.90	8.60
41		502.00	350.00	111.00	94.10	7.84	4.32
51	*	369.00*	258.00*	69.80*	63.00*	6.62*	5.76*
61		496.00	449.00	129.00	102.00	10.00	5.98
71		415.00	320.00	113.00	88.30	9.92	7.90
81		335.00	274.00	111.00	82.00	12.60	9.33
91		471.00	339.00	102.00	70.90	12.50	8.50
101		318.00	287.00	96.10	77.70	6.96	3.25

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 34. STUDY 3a, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 3,3 -DIMETHYLBENZIDINE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11	—	1590.00*	1020.00*	171.00	185.00	26.40	22.80
21		287.00	270.00	170.00	143.00	56.00	35.50
31		334.00	316.00	175.00	129.00	53.70	32.70
41		491.00	492.00	224.00	192.00	53.60	28.50
51		394.00	297.00	148.00	92.60	22.40	18.60
61	*	176.00*	15.30*	29.70*	98.00*	16.60*	23.40*
71	*	550.00*	489.00*	281.00*	205.00*	51.80*	53.20*
81		469.00	381.00	194.00	144.00	48.70	30.80
91		700.00	427.00	163.00	129.00	52.50	18.00
101		466.00	361.00	190.00	149.00	45.40	38.80

RAW DATA FOR 3,3 -DIMETHYLBENZIDINE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11		1480.00*	1090.00*	378.00*	165.00	5.79	4.32
21		253.00	343.00	179.00	143.00	41.00	29.40
31		382.00	296.00	150.00	86.70	30.30	11.90
41		445.00	298.30	164.00	140.00	26.90	10.70
51		288.00	223.00	104.00	23.50	15.10	6.61
61		403.00	266.00	110.00	91.50	17.70	19.10
71	*	625.00*	552.00*	303.00*	239.00*	74.50*	88.00*
81		317.00	163.00	30.70	28.90	15.50	3.40
91		319.00	280.00	109.00	96.60	14.20	10.70
101		488.00	492.00	121.00	74.90	5.78	1.22

RAW DATA FOR 3,3 -DIMETHYLBENZIDINE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11	*	952.00*	606.00*	261.00*	213.00*	78.80*	64.90*
21		294.00	359.00	189.00	150.00	29.20	33.30
31		383.00	299.00	157.00	129.00	54.80	42.30
41		566.00	481.00	265.00	178.00	61.30	29.60
51		419.00	316.00	129.00	99.60	34.10	26.60
61		464.00	418.00	193.00	123.00	44.70	24.60
71	*	602.00*	512.00*	237.00*	224.00*	98.60*	74.00*
81		432.00	337.00	144.00	99.70	45.00	10.80
91		565.00	388.00	156.00	120.00	40.70	18.40
101		490.00	332.00	179.00	114.00	36.40	38.90

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 35. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 4,4 -METHYLENE BIS (2-CHLOROAN IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11		547.00	371.00	140.00	118.00	43.70	32.30
21		368.00	331.00	173.00	149.00	62.00	40.20
31		358.00	311.00	164.00	133.00	54.00	35.50
41		417.00	409.00	199.00	164.00	54.00	35.10
51	*	396.00*	293.00*	143.00*	96.80*	31.70*	31.00*
61	*	213.00*	161.00*	139.00*	137.00*	41.00*	29.00*
71		569.00	499.00	269.00	213.00	45.70	58.40*
81		444.00	377.00	202.00	159.00	49.60	32.40
91		825.00*	511.00	203.00	153.00	68.10	33.50
101		479.00	359.00	182.00	158.00	47.20	32.50

RAW DATA FOR 4,4 -METHYLENE BIS (2-CHLOROAN IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11		505.00	386.00	172.00	120.00	20.70	19.70
21		442.00	355.00	177.00	144.00	49.40	37.70
31		409.00	313.00	170.00	99.70	49.20	24.50
41		407.00	275.00	149.00	130.00	39.10	24.90
51	*	118.00*	86.90*	122.00*	75.00*	11.70*	8.08*
61		434.00	280.00	137.00	107.00	30.70	29.40
71	*	653.00*	568.00*	320.00*	266.00*	95.80*	97.60*
81		398.00	161.00	153.00	103.00	39.20	14.50
91		316.00	281.00	131.00	118.00	39.10	29.10
101		542.00	470.00	189.00	144.00	39.40	22.10

RAW DATA FOR 4,4 -METHYLENE BIS (2-CHLOROAN IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11		450.00	310.00	147.00	112.00	44.30	35.40
21		442.00	376.00	211.00	175.00	65.80	55.60*
31		391.00	305.00	161.00	144.00	56.70	43.80
41		464.00	388.00	213.00	149.00	56.40	32.30
51	*	393.00*	290.00*	123.00*	85.20*	34.90*	30.10*
61		466.00	411.00	214.00	172.00	47.80	29.10
71	*	602.00*	494.00*	276.00*	208.00*	90.20*	70.70*
81		412.00	327.00	133.00	117.00	49.30	36.40
91		337.00	367.00	169.00	132.00	58.30	35.30
101		320.00	391.00	213.00	166.00	62.00	35.80

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 36. STUDY 35, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 3,3 -DIMETHOXYBENZIDINE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11	—	791.00*	502.00	88.80	88.90	18.90	13.30
21		366.00	330.00	173.30	132.00	47.30	26.50
31		435.00	341.00	187.30	140.00	48.30	25.20
41		364.00	408.00	210.00	197.00	40.90	21.80
51		395.00	287.00	109.00	68.00	9.97	5.96
61	*	165.00*	38.20*	21.30*	50.90*	2.67*	14.10*
71	*	773.00*	678.00*	373.00*	247.00*	29.90*	46.60*
81		377.00	331.00	191.00	127.00	19.90	11.00
91		529.00*	340.00	130.00	106.00	23.90	6.11
101		362.00	292.00	123.00	98.50	17.30	13.20

RAW DATA FOR 3,3 -DIMETHOXYBENZIDINE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11		798.00*	586.00	128.00	60.00	9.99	4.92
21		318.00	364.00	152.00	127.00	29.00	20.20
31		425.00	304.00	150.00	74.30	31.10	7.90
41		440.00	290.00	192.00	144.00	20.30	10.80
51		349.00	254.00	93.40	22.30	16.30	7.19
61		350.00	216.00	93.80	70.10	17.60	20.90
71	*	981.00*	838.00*	451.00*	312.00*	108.00*	158.00*
81	*	276.00*	115.00*	53.30*	22.10*	7.81*	1.82*
91		271.00	248.00	90.10	65.40	10.60	9.44
101		386.00	478.00	54.60	21.20	4.04	1.36

RAW DATA FOR 3,3 -DIMETHOXYBENZIDINE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11		895.00*	475.00	193.00	167.00	53.50	37.30
21		404.00	359.00	206.30	171.00	38.10	36.70
31		432.00	373.00	179.30	135.00	49.10	40.10
41		600.00	562.00	331.00*	183.00	53.10	22.40
51		390.00	287.00	112.00	70.80	27.20	20.90
61		513.00	409.00	185.30	104.00	33.90	21.40
71	*	934.00*	751.00*	437.00*	328.00*	143.00*	112.00*
31		420.00	316.00	107.00	77.30	25.80	9.08
91		490.00	271.00	121.00	81.60	28.30	4.49
101		537.00	341.00	126.00	68.30	12.80	12.60

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 37. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 2-METHYLNAPHTHALENE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		435.00	340.00	103.00	79.40	12.40	8.47
21		337.00	294.00	107.00	86.40	10.90	6.60
31		270.00	222.00	106.00	96.80	14.30	9.62
41		409.00	366.00	100.00	90.20	12.90	8.37
51		270.00	239.00	109.00	90.90	11.60	10.60
61		253.00	198.00	101.00	94.00	11.40	7.24
71		459.00	358.00	97.70	98.80	12.20	7.46
81		320.00	281.00	113.00	93.80	13.20	10.10
91		230.00	209.00	101.00	84.70	18.10	10.20
101		392.00	323.00	106.00	98.90	12.30	8.54

RAW DATA FOR 2-METHYLNAPHTHALENE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		379.00	322.00	89.20	79.50	11.20	8.43
21	*	305.00*	245.00*	93.10*	76.40*	9.90*	8.10*
31		261.00	254.00	98.70	93.90	14.00	9.59
41		461.00	330.00	96.30	90.90	12.40	8.14
51		311.00	268.00	111.00	89.60	15.40	11.80
61		527.00	348.00	100.00	92.70	10.40	8.60
71	*	502.00*	421.00*	133.00*	101.00*	14.60*	10.20*
81		271.00	115.00*	90.90	96.70	13.70	9.51
91		316.00	277.00	93.90	76.90	12.10	8.33
101		371.00	290.00	123.00	107.00	15.50	10.90

RAW DATA FOR 2-METHYLNAPHTHALENE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		373.00	268.00	87.90	63.10	9.26	6.96
21		355.00	320.00	120.00	107.00	12.10	9.10
31		296.00	259.00	106.00	90.30	14.10	10.40
41		404.00	299.00	100.00	84.20	12.70	8.42
51		253.00	243.00	92.50	83.50	11.60	9.25
61		464.00	423.00	132.00	92.50	11.00	8.39
71		505.00	371.00	118.00	86.90	11.40	9.00
81		299.00	229.00	116.00	70.90	13.70	9.57
91		310.00	245.00	85.90	77.10	13.20	9.47
101		336.00	240.00	108.00	86.50	14.60	10.40

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UO = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 38. STUDY 36, SW 846 METHOD 3270, SEMI-VOLATILES, GC-MS

RAW DATA FOR METHYL METHANE SULFONATE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11	*	204.00*	188.00*	54.50*	41.80*	5.24*	4.23*
21		265.00	213.00	79.60	60.30	7.90	4.80
31		303.00	252.00	83.70	61.70	10.30	5.10
41	*	330.00*	372.00*	105.00*	98.40*	11.60*	14.20*
51		220.00	192.00	82.70	64.20	9.93	5.61
61		293.00	213.00	61.30*	55.40	8.56	3.99
71		323.00	244.00	86.60	67.90	2.08*	3.01
81		271.00	222.00	81.50	63.10	9.95	4.62
91		226.00	289.00	89.00	66.50	11.40	6.75
101		315.00	250.00	84.00	67.20	8.20	4.09

RAW DATA FOR METHYL METHANE SULFONATE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		227.00	195.00	58.30	43.80	7.11	4.88
21		244.00	214.00	77.90	46.10	9.10	5.60
31		350.00	295.00	88.50	82.20	11.10	2.50
41	*	395.00*	329.00*	113.00*	80.80*	11.00*	8.48*
51		209.00	170.00	53.50	57.60	7.62	6.56
61	*	78.50*	205.00*	51.50*	41.70*	6.23*	3.77*
71		340.00	232.00	65.90	53.00	6.40	3.36
81		270.00	217.00	75.00	66.90	10.30	2.29
91		286.00	266.00	78.60	59.80	8.92	6.06
101		353.00	239.00	80.40	73.40	9.36	5.67

RAW DATA FOR METHYL METHANE SULFONATE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		429.00	340.00	67.30	64.80	8.91	5.97
21		249.00	215.00	75.10	63.40	7.40	4.50
31	*	222.00*	176.00*	51.90*	41.00*	5.30*	3.50*
41	*	446.00*	410.00*	110.00*	89.20*	19.00*	11.30*
51		211.00	202.00	81.00	62.20	9.25	6.96
61		288.00	256.00	83.90	61.90	9.14	3.24
71		391.00	320.00	104.00	79.00*	10.50	5.80
81		299.00	247.00	80.10	69.20	9.34	4.69
91		306.00	256.00	73.20	66.90	9.52	5.72
101		398.00	271.00	86.20	66.90	7.68	5.32

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 39. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR N-NITROSOMORPHOLINE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		350.00	298.00	72.30	56.30	9.70	5.69
21		214.00	177.00	74.30	55.60	6.80	3.70
31		361.00	297.00	96.40*	76.80	10.90	6.00
41	*	561.00*	472.00*	113.00*	113.00*	12.40*	11.30*
51		247.00	216.00	82.50	65.70	8.28	6.65
61		389.00	296.00	70.40	70.40	8.99	5.44
71		340.00	249.00	78.30	57.90	7.56	3.34
81		266.00	232.00	74.60	54.90	9.07	5.21
91	*	423.00*	366.00*	104.00*	81.00*	13.90*	8.53*
101		316.00	257.00	75.50	54.70	8.47	3.30

RAW DATA FOR N-NITROSOMORPHOLINE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		333.00	292.00	81.90	45.60	10.20	6.45
21	*	265.00*	209.00*	75.70*	53.80*	9.40*	5.50*
31		461.00	382.00	111.00	115.00	15.40	8.90
41	*	786.00*	686.00*	238.00*	157.00*	21.10*	17.70*
51		345.00	230.00	81.30	72.60	10.80	8.04
61		225.00	283.00	84.90	66.40	13.80	7.56
71		351.00	255.00	78.90	63.10	10.30	6.11
81		320.00	246.00	88.70	68.50	12.20	7.02
91		425.00	373.00	115.00	89.40	15.30	10.70*
101		416.00	368.00	93.20	94.60	10.40	6.14

RAW DATA FOR N-NITROSOMORPHOLINE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		590.00	467.00	99.30	81.40	11.90	7.83
21	*	225.00*	202.00*	70.50*	57.70*	6.60*	3.90*
31		311.00	273.00	83.80	62.20	7.50	5.20
41	*	618.00*	599.00*	170.00*	133.00*	19.00*	13.60*
51		232.00	224.00	90.30	67.70	9.89	5.66
61		333.00	292.00	95.90	71.60	11.70	4.45
71		363.00	280.00	81.50	53.20	6.79	3.79
81		275.00	221.00	70.30	57.60	10.00	5.59
91		119.00	132.00	97.90	82.70	12.90	8.16
101		434.00	307.00	79.50	60.10	7.49	3.69

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 40. STUDY 35, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 4-METHYLPHENOL IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11	*	317.00*	264.00*	109.00*	67.30*	15.40*	11.10*
21		366.00	284.00	140.00	94.30	15.60	11.90
31		335.00	313.00	139.00	122.00	22.00	16.80
41		507.00	360.00	142.00	116.00	13.20	14.90
51	*	467.00*	357.00*	208.00*	164.00*	36.90*	30.40*
61		354.00	274.00	100.00	85.10	17.10	11.40
71		370.00	305.00	111.00	75.30	3.53	9.51
81		326.00	274.00	116.00	97.80	19.40	11.40
91		402.00	321.00	134.00	102.00	25.50	20.90
101		290.00	250.00	116.00	91.20	17.50	13.30

RAW DATA FOR 4-METHYLPHENOL IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		315.00	262.00	117.00	102.00	36.10	31.70
21		334.00	296.00	161.00	121.00	34.10	30.60
31		327.00	313.00	172.00	136.00	36.00	30.20
41		562.00	523.00*	159.00	123.00	0.00*	0.00*
51	*	333.00*	235.00*	100.00*	60.70*	13.60*	12.40*
61		287.00	273.00	129.00	99.30	54.20	33.30
71		466.00	365.00	127.00	106.00	46.00	32.30
81		333.00	287.00	128.00	92.60	19.90	20.80
91		385.00	359.00	147.00	109.00	24.10	18.40
101		372.00	312.00	126.00	111.00	22.50	20.50

RAW DATA FOR 4-METHYLPHENOL IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		628.00	479.00	133.00	106.00	19.80	16.60
21		347.00	282.00	130.00	105.00	14.20	12.30
31		321.00	258.00	130.00	98.30	16.90	15.00
41		443.00	367.00	191.00	130.00	19.50	13.80
51		311.00	284.00	176.00	139.00	29.90*	23.60
61		286.00	261.00	120.00	84.30	17.40	9.05
71		498.00	413.00	154.00	92.20	16.40	16.70
81	*	279.00*	231.00*	110.00*	81.30*	14.90*	8.57*
91		327.00	275.00	120.00	92.40	20.40	19.30
101		301.00	233.00	112.00	77.40	16.70	14.30

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 41. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 2,6-DICHLOROPHENOL IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		375.00	319.00	129.00	78.40	17.90	13.10
21		377.00	331.00	156.00	106.00	17.10	12.50
31		394.00	354.00	151.00	124.00	23.60	17.60
41		549.00*	391.00	154.00	131.00	20.80	15.60
51		326.00	296.00	160.00	126.00	24.60	25.70
61		395.00	301.00	114.00	98.20	17.40	15.90
71		401.00	345.00	152.00	99.20	7.68*	14.50
81		339.00	295.00	132.00	111.00	23.80	19.50
91		421.00	366.00	154.00	112.00	26.50	22.20
101		414.00	343.00	153.00	118.00	22.50	17.30

RAW DATA FOR 2,6-DICHLOROPHENOL IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		361.00	304.00	116.00	81.90	18.90	13.10
21		359.00	338.00	154.00	110.00	24.20	21.10
31		420.00	357.00	166.00	135.00	26.60	20.40
41	*	706.00*	589.00*	153.00*	132.00*	30.00*	25.10*
51	*	285.00*	227.00*	91.20*	67.40*	14.10*	11.40*
61		329.00	303.00	131.00	92.40	25.10	15.90
71		500.00	395.00	120.00	91.50	22.30	15.70
81		347.00	301.00	137.00	112.00	26.40	20.30
91		411.00	363.00	152.00	114.00	24.30	20.60
101		364.00	284.00	126.00	112.00	24.40	18.70

RAW DATA FOR 2,6-DICHLOROPHENOL IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		633.00	534.00	138.00	119.00	21.80	18.10
21		390.00	324.00	147.00	115.00	16.40	12.90
31		372.00	308.00	136.00	92.40	17.30	16.10
41		538.00	448.00	178.00	128.00	20.00	13.10
51		266.00	293.00	144.00	105.00	19.70	15.60
61		329.00	297.00	127.00	87.00	18.80	13.30
71		499.00	441.00	169.00	113.00	22.30	19.00
81		308.00	252.00	127.00	105.00	25.40	18.30
91		391.00	335.00	144.00	110.00	23.30	20.20
101		372.00	304.00	144.00	112.00	24.90	19.50

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 42. STUDY 39, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 1,2,4,5-TETRACHLOROBENZENE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED—						
11		317.00	263.00	55.40	54.10	10.80	6.65
21	*	255.00*	223.00*	74.10*	58.10*	8.90*	5.60*
31		332.00	298.00	100.00	92.10	12.60	8.10
41	*	433.00*	315.00*	111.00*	77.70*	13.90*	7.64*
51		255.00	273.00	98.30	72.10	11.20	6.70
61		349.00	274.00	74.60	67.10	11.40	6.77
71		431.00	365.00*	102.00	74.80	4.90*	6.65
81		205.00	233.00	72.90	64.40	12.00	8.29
91		324.00	297.00	104.00	72.60	13.30	9.01
101		268.00	257.00	89.30	81.00	14.20	7.49

RAW DATA FOR 1,2,4,5-TETRACHLOROBENZENE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		327.00	297.00	76.00	62.20	10.10	6.27
21		248.00	241.00	76.30	59.30	10.00	6.50
31	*	421.00*	390.00*	131.00*	106.00*	14.50*	7.10*
41	*	430.00*	362.00*	104.00*	78.00*	12.90*	8.30*
51		317.00	243.00	93.40	63.70	9.55	4.74
61		220.00	297.00	71.00	71.00	8.36	7.33
71		425.00	333.00	77.90	62.00	12.70	6.23
81		250.00	249.00	80.40	65.30	15.00	9.41
91		279.00	265.00	76.80	58.70	11.10	7.24
101		232.00	214.00	81.20	75.00	11.90	7.00

RAW DATA FOR 1,2,4,5-TETRACHLOROBENZENE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11	*	545.00*	422.00*	90.20*	75.70*	14.00*	8.95*
21	*	216.00*	132.00*	74.70*	57.30*	8.00*	4.60*
31		296.00	256.00	78.60	66.60	9.70	5.80
41		410.00	349.00	99.70	74.70	13.30	7.65
51		266.00	217.00	88.70	61.60	7.34	5.63
61		322.00	314.00	97.20	69.90	11.70	5.12
71		417.00	362.00	76.10	60.70	12.40	7.86
81		285.00	227.00	80.90	74.10	17.90	10.80
91		239.00	241.00	60.50	56.50	10.60	6.15
101		280.00	217.00	91.40	90.20	13.70	9.06

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UU = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 43. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR ISOSAFROLE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		374.00	309.00	57.20	60.40	11.60	6.86
21		425.00	371.00	117.00	92.00	10.30	4.50
31		376.00	361.00	99.40	89.30	12.40	7.50
41	*	591.00*	429.00*	134.00*	107.00*	17.90*	10.40*
51		307.00	292.00	99.60	70.50	10.40	6.92
61		444.00	394.00	82.90	77.50	11.80	7.53
71		388.00	315.00	95.40	72.40	3.70*	5.64
81		235.00	299.00	91.20	90.70	14.90	9.31
91		421.00	376.00	117.00	98.00	15.80	10.60
101		421.00	338.00	99.00	84.30	12.30	7.39

RAW DATA FOR ISOSAFROLE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		365.00	323.00	84.10	70.40	10.70	6.97
21	*	430.00*	381.00*	125.00*	104.00*	17.20*	12.30*
31		425.00	386.00	113.00	89.80	12.70	8.20
41	*	666.00*	553.00*	153.00*	123.00*	20.10*	12.30*
51		401.00	294.00	88.70	69.80	10.40	5.78
61		349.00	377.00	87.90	74.40	11.00	8.13
71		406.00	334.00	101.00	70.40	11.20	4.80
81		331.00	312.00	98.90	86.20	15.60	10.60
91		376.00	350.00	105.00	82.20	15.10	9.61
101		340.00	298.00	84.90	76.20	11.20	6.34

RAW DATA FOR ISOSAFROLE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11	*	674.00*	548.00*	120.00*	99.40*	16.00*	10.30*
21		440.00	376.00	136.00	104.00	12.50	6.00
31		336.00	293.00	87.40	75.90	10.80	6.60
41		551.00	461.00	133.00	95.70	11.30	5.25
51	*	286.00*	249.00*	93.20*	66.10*	8.12*	6.04*
61		388.00	367.00	106.00	77.80	12.10	5.27
71		476.00	383.00	101.00	76.70	9.09	7.33
81		334.00	253.00	93.90	75.20	14.00	8.42
91		367.00	313.00	85.60	79.10	12.90	9.11
101		368.00	263.00	88.70	79.30	11.20	6.71

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 44. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR DIBENZOFURAN IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		365.00	296.00	62.90*	66.40*	11.90	7.09
21		252.00	211.00	101.00	83.30	15.00	9.90
31		280.00	275.00	104.00	97.00	14.80	8.70
41		484.00	361.00	112.00	93.80	13.60	8.24
51		279.00	305.00	117.00	92.60	17.90	10.40
61		410.00	315.00	87.80	81.00	13.00	7.59
71		439.00	403.00	116.00	90.20	6.04*	8.12
81		240.00	279.00	99.30	91.10	16.40	10.80
91		371.00	338.00	115.00	86.00	15.10	9.36
101		372.00	297.00	103.00	94.30	14.70	9.67

RAW DATA FOR DIBENZOFURAN IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		328.00	302.00	90.60	74.70	11.40	6.98
21		243.00	210.00	99.00	85.80	15.40	10.10
31		282.00	249.00	104.00	88.00	14.40	8.70
41	*	511.00*	451.00*	126.00*	90.40*	13.50*	9.87*
51		273.00	224.00	95.90	79.10	11.70	7.77
61		372.00	322.00	87.90	72.70	10.90	7.67
71		394.00	311.00	123.00*	89.50	14.00	7.8*
81		303.00	281.00	96.60	82.90	15.60	9.90
91		346.00	317.00	100.00	77.20	13.60	8.98
101		231.00	251.00	91.20	76.60	14.40	8.64

RAW DATA FOR DIBENZOFURAN IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11	*	542.00*	479.00*	130.00*	105.00*	16.10*	9.67*
21		242.00	195.00	104.00	88.60	14.50	8.70
31		295.00	259.00	96.90	87.80	12.50	7.70
41		498.00	410.00	122.00	90.40	13.40	7.99
51		258.00	219.00	102.00	82.50	12.20	8.4*
61		355.00	364.00	107.00	77.60	12.50	5.61
71		570.00	515.00	123.00	89.60	14.40	8.87
81		338.00	268.00	106.00	92.40	20.10*	11.90
91		355.00	314.00	84.40	77.90	13.20	8.51
101		307.00	232.00	93.80	90.30	14.30	11.10

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 45. STUDY 39, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR N-NITROSODIPHENYLAMINE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		462.00	377.00	69.20	33.70	13.70	8.72
21		366.00	315.00	129.00	106.00	17.00	8.70
31		419.00	381.00	145.00	119.00	17.30	10.10
41		388.00	419.00	126.00	111.00	14.20	9.97
51		332.00	296.00	122.00	92.70	15.60	8.24
61		213.00	337.00	70.40	93.50	14.60	8.93
71		460.00	361.00	118.00	96.10	5.50*	8.30
81		287.00	259.00	106.00	96.40	15.00	10.50
91		432.00	397.00	120.00	99.40	17.10	11.20
101		363.00	295.00	112.00	91.30	13.80	8.24

RAW DATA FOR N-NITROSODIPHENYLAMINE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		390.00	349.00	102.00	93.70	14.10	8.47
21		433.00	381.00	155.00	119.00	21.10	13.30
31	*	298.00*	234.00*	92.10*	81.50*	11.40*	7.50*
41	*	765.00*	650.00*	189.00*	137.00*	22.40*	13.20*
51		405.00	264.00	122.00	81.30	13.70	10.60
61		484.00	413.00	113.00	87.70	13.70	8.74
71		553.00	404.00	146.00	117.00	17.10	9.31
81		347.00	287.00	108.00	86.20	19.70	10.20
91		432.00	395.00	127.00	101.00	16.70	11.00
101		329.00	302.00	99.90	92.30	14.80	9.41

RAW DATA FOR N-NITROSODIPHENYLAMINE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11	*	676.00*	559.00*	161.00*	124.00*	19.00*	11.50*
21		428.00	356.00	142.00	106.00	16.00	9.00
31		469.00	398.00	141.00	112.00	12.20	8.10
41		602.00	508.00	162.00	113.00	14.10	8.00
51		373.00	246.00	106.00	83.40	11.30	8.34
61		371.00	331.00	110.00	81.90	19.30	5.93
71		599.00	472.00	124.00	92.30	14.60	10.40
81		357.00	279.00	107.00	84.50	16.90	9.10
91		431.00	353.00	107.00	94.90	14.30	9.79
101		328.00	242.00	105.00	87.00	17.40	8.69

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UQ = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 46. STUDY 36,SW 946 METHOD 8270,SEMI-VOLATILES,GC-MS

RAW DATA FOR PHENACETIN IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11		388.00	382.00	130.00	140.00	49.30	38.20
21		387.00	343.00	198.00	150.00	54.80	33.70
31	*	416.00*	492.00*	255.00*	223.00*	76.10*	57.30*
41		708.00	492.00	230.00	221.00*	50.20	43.40
51		330.00	232.00	155.00	171.00	50.80	26.60
61		343.00	314.00	138.00	146.00	43.80	29.00
71		571.00	476.00	229.00	165.00	30.90	50.40
81		326.00	237.00	159.00	138.00	57.50	42.00
91		492.00	327.00	172.00	128.00	56.90	45.00
101		436.00	363.00	159.00	134.00	47.50	32.10

RAW DATA FOR PHENACETIN IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11		297.00	280.00	127.00	83.20	47.20	27.20
21		376.00	321.00	175.00	134.00	51.30	41.80
31		371.00	280.00	110.00	116.00	42.60	26.90
41	*	739.00*	705.00*	219.00*	212.00*	84.90*	34.90*
51		302.00	234.00	134.00	126.00	11.10*	15.60
61		394.00	312.00	152.00	131.00	46.90	38.10
71	*	555.00*	471.00*	201.00*	177.00*	94.20*	61.30*
81		468.00	421.00	212.00	159.00	69.60	50.60
91		402.00	326.00	173.00	134.00	56.20	44.00
101		288.00	256.00	130.00	113.00	49.40	36.60

RAW DATA FOR PHENACETIN IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11	*	686.00*	595.00*	276.00*	215.00*	76.40*	51.10*
21		374.00	309.00	180.00	165.00	55.80	35.30
31		707.00	563.00	297.00	208.00	60.10	48.90
41		510.00	424.00	297.00	211.00	60.60	46.30
51	*	436.00*	259.00*	153.00*	129.00*	41.10*	37.00*
61		403.00	353.00	181.00	132.00	48.30	17.30
71		555.00	512.00	263.00	192.00	83.70*	66.80
81		343.00	295.00	171.00	135.00	60.70	42.30
91		483.00	386.00	185.00	153.00	59.10	38.50
101		432.00	336.00	156.00	123.00	48.80	39.60

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 47. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR PRONAMIDE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		590.00	502.00	110.00	133.00	22.60	19.90
21		445.00	395.00	188.00	143.00	25.80	19.00
31		554.00	476.00	199.00	152.00	28.30	23.60
41		690.00	501.00	203.00	175.00*	19.40	18.40
51		436.00	401.00	175.00	130.00	24.70	17.30
61		545.00	381.00	131.00	124.00	17.50	12.10
71		536.00	451.00	179.00	126.00	17.40	24.60
81		323.00	357.00	137.00	120.00	23.70	20.20
91		509.00	435.00	174.00	124.00	27.30	18.50
101		444.00	397.00	151.00	122.00	16.10	13.40

RAW DATA FOR PRONAMIDE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		422.00	368.00	127.00	94.00	23.80	16.40
21		461.00	385.00	168.00	124.00	24.60	21.10
31		411.00	321.00	117.00	102.00	19.30	14.60
41	*	664.00*	651.00*	228.00*	170.00*	34.40*	22.70*
51		391.00	239.00	143.00	98.30	17.50	21.60
61		512.00	444.00	151.00	118.00	22.70	17.60
71		556.00	454.00	163.00	130.00	35.60*	27.00
81		400.00	379.00	212.00	159.00	60.60*	20.50
91		382.00	366.00	155.00	113.00	28.10	23.50
101		386.00	330.00	134.00	112.00	21.60	17.80

RAW DATA FOR PRONAMIDE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11	*	790.00*	680.00*	252.00*	183.00*	32.90*	26.50*
21		467.00	383.00	182.00	152.00	24.90	18.50
31		626.00	486.00	202.00	138.00	21.60	19.50
41		507.00	495.00	226.00	164.00	30.60	27.00
51		468.00	320.00	141.00	109.00	16.40	16.20
61		447.00	403.00	157.00	108.00	17.90	6.74
71		588.00	475.00	196.00	130.00	31.50	28.60
81		393.00	348.00	135.00	105.00	27.10	22.10
91		361.00	337.00	174.00	145.00	29.10	20.40
101		482.00	374.00	153.00	107.00	19.30	17.00

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 48. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 2-ACETYLAMINOFLUORENE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11		361.00	479.00	129.00	172.00	58.70	43.60
21		543.00	473.00	254.00	192.00	56.40	28.70
31		440.00	395.00	213.00	167.00	44.80	27.10
41		620.00	457.00	211.00	169.00	23.10	27.30
51		320.00	302.00	138.00	111.00	40.10	26.90
61		448.00	375.00	141.00	150.00	47.70	29.10
71		503.00	300.00	164.00	162.00	31.20	44.00
81		284.00	293.00	164.00	128.00	49.50	37.30
91		452.00	440.00	211.00	153.00	65.90	49.40
101		436.00	356.00	176.00	136.00	50.60	36.60

RAW DATA FOR 2-ACETYLAMINOFLUORENE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11		532.00	372.00	196.00	162.00	67.80	40.20
21		588.00	464.00	225.00	179.00	63.90	43.80
31		969.00	727.00	269.00	212.00	69.50	34.30
41		842.00	615.00	391.00*	279.00	108.00*	19.50
51	*	319.00*	209.00*	124.00*	105.00*	32.90*	29.20*
61		408.00	399.00	145.00	146.00	48.00	40.80
71	*	661.00*	592.00*	280.00*	213.00*	99.80*	64.00*
81		406.00	346.00	180.00	145.00	60.10	47.30
91		297.00	321.00	159.00	116.00	54.90	43.20
101		412.00	363.00	173.00	151.00	64.30	54.60

RAW DATA FOR 2-ACETYLAMINOFLUORENE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11	*	906.00*	711.00*	314.00*	219.00*	78.00*	45.60*
21		570.00	479.00	242.00	214.00	55.00	29.70
31		418.00	327.00	236.00	211.00	45.30	31.20
41		465.00	503.00	270.00	200.00	34.40	35.60
51		320.00	324.00	163.00	170.00	42.10	38.40
61		391.00	344.00	179.00	127.00	45.90	12.30
71		623.00	531.00	247.00	200.00	74.50	54.00
81		332.00	347.00	173.00	167.00	58.50	50.00
91		515.00	412.00	205.00	168.00	63.60	46.40
101		411.00	339.00	169.00	138.00	55.40	44.50

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 49. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR TRIS(2,3-DIBROMOPROPYL) PHOSPH IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11		396.00	379.00	163.00	217.00	0.08	0.07
21	*	286.00*	247.00*	80.90*	90.40*	0.00*	0.00*
31		2013.00*	1503.00*	1054.00*	850.00*	0.00*	0.00*
41		391.00	291.00	161.00	124.00	27.60	23.10
51		287.00	256.00	97.10	77.30	26.20	14.10
61		651.00	435.00	81.10	134.00	17.10	11.20
71		422.00	169.00	*	*	*	*
81		296.00	300.00	162.00	152.00	59.10	36.60
91		585.00	460.00	248.00	194.00	116.00*	94.50*
101		780.00	572.00	219.00	148.00	19.50	11.90

RAW DATA FOR TRIS(2,3-DIBROMOPROPYL) PHOSPH IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11		409.00	387.00	166.00	150.00	32.20	20.90
21	*	118.00*	102.00*	0.00*	0.00*	0.00*	0.00*
31		4668.00*	4081.00*	1340.00*	1040.00*	0.00*	0.00*
41		345.00	241.00	99.10	69.00	0.00*	0.00*
51		241.00	167.00	34.20	54.20	10.90	6.00
61		282.00	329.00	105.00	94.40	21.50	18.40
71	*	858.00*	709.00*	515.00*	548.00*	271.00*	135.00*
81		416.00	290.00	147.00	131.00	55.90	29.20
91		636.00	511.00	333.00*	241.00	69.00	25.60
101		196.00	35.00	55.90	37.80	10.60	8.38

RAW DATA FOR TRIS(2,3-DIBROMOPROPYL) PHOSPH IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11		700.00	600.00	227.00	173.00	35.10	15.30
21	*	185.00*	157.00*	33.90*	45.20*	0.00*	0.00*
31		2385.00*	1907.00	1062.00*	590.00	0.00*	0.00*
41		422.00	620.00	347.00	314.00	76.50	39.80*
51		506.00	218.00	74.60	57.20	15.70	13.60
61		411.00	326.00	165.00	99.60	27.50	16.10
71	*	822.00*	836.00*	559.00*	499.00*	*	*
81		323.00	340.00	120.00	104.00	22.40	17.20
91		1040.00	1110.00	537.00	443.00	64.60	137.00*
101		535.00	377.00	157.00	108.00	20.90	17.30

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 50. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR BENZYL ALCOHOL IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		306.00	257.00	93.10	66.70	15.00	11.30
21		300.00	273.00	128.00	92.80	9.70	5.40
31		373.00	314.00	147.00	113.00	20.00	15.50
41	*	512.00*	393.00*	156.00*	146.00*	19.00*	17.40*
51		276.00	242.00	131.00	103.00	21.30	17.80
61		349.00	255.00	93.00	96.40	14.90	11.90
71		367.00	298.00	129.00	94.20	4.12	8.90
81		326.00	278.00	115.00	99.80	16.30	13.50
91		550.00*	403.00*	103.00	101.00	10.60	19.70
101		356.00	294.00	124.00	89.70	15.90	12.30

RAW DATA FOR BENZYL ALCOHOL IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		334.00	284.00	113.00	96.70	17.90	16.00
21		291.00	260.00	134.00	104.00	18.60	18.20
31		386.00	324.00	128.00	117.00	19.80	13.70
41	*	650.00*	527.00*	255.00*	173.00*	30.80*	35.80*
51	*	323.00*	242.00*	47.40*	61.00*	13.30*	2.46*
61		213.00	262.00	106.00	79.80	27.70	13.70
71		416.00	305.00	133.00	106.00	21.00	16.20
81		351.00	281.00	126.00	100.00	22.10	18.70
91	*	493.00*	441.00*	194.00*	136.00*	45.10*	33.20*
101		368.00	313.00	108.00	96.90	17.20	12.90

RAW DATA FOR BENZYL ALCOHOL IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11	*	600.00*	473.00*	138.00*	110.00*	21.10*	16.60*
21		330.00	278.00	130.00	99.30	10.30	7.40
31		339.00	286.00	119.00	88.10	17.80	12.20
41		532.00	532.00*	208.00*	141.00*	19.00	14.50
51		282.00	260.00	138.00	107.00	21.20	15.80
61		313.00	276.00	122.00	86.60	16.20	10.40
71		461.00	363.00	156.00	108.00	18.20	16.20
81		324.00	266.00	119.00	90.00	17.80	14.80
91		440.00	334.00	139.00	110.00	11.10	4.59
101		372.00	282.00	95.00	86.20	15.20	13.30

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 51. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR DIHYDROSAFROLE IN REAGENT WATER

INCREMENT IN UG/L		AMPUL 1 480.00	AMPUL 2 400.00	AMPUL 3 120.00	AMPUL 4 96.00	AMPUL 5 13.60	AMPUL 6 9.60
LAB/AN	LAB REJECTED =						
11		346.00	296.00	59.70	59.20	11.10	6.44
21		321.00	290.00	104.00	76.80	10.20	3.30
31		359.00	336.00	105.00	86.20	12.80	6.90
41	*	509.00*	358.00*	114.00*	95.00*	14.60*	8.66*
51		245.00	226.00	96.50	76.90	11.10	6.54
61		401.00	304.00	83.10	93.00	13.60	8.49
71		382.00	324.00	113.00	78.30	5.86	7.64
81		192.00	208.00	84.20	75.30	12.80	8.9*
91		347.00	316.00	111.00	81.80	15.20	10.10
101		340.00	309.00	110.00	100.00	16.00	9.12

RAW DATA FOR DIHYDROSAFROLE IN GROUND WATER

INCREMENT IN UG/L		AMPUL 1 480.00	AMPUL 2 400.00	AMPUL 3 120.00	AMPUL 4 96.00	AMPUL 5 13.60	AMPUL 6 9.60
LAB/AN	LAB REJECTED						
11		342.00	322.00	87.10	67.90	11.00*	6.45
21		315.00	284.00	99.90	76.90	13.10	8.50
31		386.00	303.00	118.00	101.00	13.30	6.90
41	*	586.00*	500.00*	136.00*	103.00*	16.60*	9.94*
51	*	289.00*	244.00*	68.30*	66.90*	9.29*	5.31*
61		243.00	320.00	84.10	76.30	13.30	7.21
71		416.00	347.00	104.00	74.30	14.10	7.70
81		207.00	220.00	82.40	67.70	13.80	8.96
91		304.00	280.00	93.50	70.60	12.80	8.89
101		315.00	267.00	106.00	93.80	22.60*	14.40*

RAW DATA FOR DIHYDROSAFROLE IN LEACHATE

INCREMENT IN UG/L		AMPUL 1 480.00	AMPUL 2 400.00	AMPUL 3 120.00	AMPUL 4 96.00	AMPUL 5 13.60	AMPUL 6 9.60
LAB/AN	LAB REJECTED						
11		617.00	493.00	101.00	90.20	14.60	9.60
21		252.00	234.00	94.30	76.10	9.40	4.80
31		324.00	275.00	89.70	66.00	8.60	5.80
41		538.00	451.00	139.00	104.00	14.30	8.29
51		221.00	255.00	100.00	72.20	9.60	5.93
61		367.00	339.00	107.00	92.50	13.40	7.44
71		423.00	374.00	110.00	75.70	13.60	8.88
81		264.00	217.00	78.40	71.40	15.90	9.13
91		285.00	274.00	76.60	70.40	12.10	7.95
101		319.00	274.00	103.00	97.20	19.60	12.40

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 52. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 1,3-DINITROBENZENE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11		447.00	348.00	104.00	126.00	45.80	31.40
21		313.00	321.00	195.00	153.00	53.20	36.30
31	*	588.00*	309.00*	226.00*	195.00*	63.80*	41.10*
41		497.00	359.00	166.00	143.00	38.90	22.30
51		370.00	356.00	170.00	123.00	49.00	30.40
61		434.00	366.00	134.00	135.00	36.00	28.10
71		448.00	327.00	178.00	155.00	24.70	39.30
81		283.00	299.00	167.00	143.00	61.90	45.20
91		409.00	350.00	215.00	162.00	65.90	49.50
101		528.00	408.00	196.00	163.00	60.20	38.60

RAW DATA FOR 1,3-DINITROBENZENE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11		222.00	319.00	156.00	128.00	47.80	32.00
21		326.00	285.00	176.00	150.00	57.70	42.70
31		343.00	279.00	162.00	136.00	48.10	37.20
41	*	591.00*	496.00*	271.00*	219.00*	70.30*	43.80*
51	*	377.00*	249.00*	131.00*	120.00*	38.80*	32.60*
61		427.00	395.00	165.00	125.00	51.70	33.30
71		487.00	361.00	203.00	164.00	64.90	39.10
81		327.00	293.00	170.00	86.20	15.60*	10.60*
91		412.00	354.00	197.00	154.00	59.20	44.00
101		383.00	317.00	146.00	123.00	49.10	34.60

RAW DATA FOR 1,3-DINITROBENZENE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	64.00	48.00
LAB/AN	LAB REJECTED						
11		689.00	602.00	255.00	179.00	56.60	32.40
21		344.00	290.00	186.00	176.00	51.80	36.30
31		562.00	495.00	208.00	176.00	49.10	36.00
41		433.00	332.00	207.00	147.00	32.10	25.90
51	*	286.00*	265.00*	129.00*	93.00*	31.40*	23.60*
61		409.00	364.00	175.00	121.00	43.00	22.30
71		462.00	396.00	200.00	157.00	64.60	44.90
81		394.00	321.00	194.00	148.00	71.80	49.00
91		392.00	312.00	177.00	150.00	57.30	43.90
101		423.00	302.00	144.00	125.00	43.20	36.10

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 53. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR CHLOROBENZILATE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11		70.20	48.90	3.76	3.02	0.47	0.39
21		148.00	146.00	33.70	33.00	5.30	1.10
31		102.00	66.90	10.10	5.00	0.28	0.00*
41	*	557.00*	374.00*	119.00*	60.20*	8.10*	2.70*
51		169.00	92.90	23.50	21.00	5.03	2.67
61		22.10	22.20	8.28	16.80	2.36	3.10
71	*	348.00*	376.00*	119.00*	74.60*	4.82*	6.69*
81		66.20	44.50	14.00	6.50	0.45	0.25
91		289.00	218.00	75.60	55.50	9.89	7.38
101		276.00	247.00	63.30	55.20	5.56	2.65

RAW DATA FOR CHLOROBENZILATE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11	*	10.70*	9.49*	1.97*	1.98*	0.29*	0.16*
21		113.00	56.90	12.50	5.60	1.00	1.10
31		151.00	85.70	17.20	11.60	0.60	0.00*
41	*	580.00*	543.00*	129.00*	82.60*	13.20*	14.40*
51		116.00	57.20	11.10	13.80	1.19	1.67
61		298.00	243.00	41.60	30.20	3.71	2.88
71		315.00	245.00	100.00	80.30	4.00	3.15
81	*	22.50*	15.60*	2.69*	0.86*	0.10*	0.11*
91		201.00	172.00	57.10	44.90	7.11	5.25
101		157.00	116.00	41.60	31.80	3.78	2.00

RAW DATA FOR CHLOROBENZILATE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	13.60	9.60
LAB/AN	LAB REJECTED						
11	*	9.66*	7.92*	2.02*	1.69*	0.26*	0.23*
21		125.00	102.00	13.60	4.60	2.90	1.00
31	*	43.70*	7.00*	0.94*	1.00*	0.00*	0.00*
41	*	230.00*	290.00*	93.40*	55.80*	5.17*	2.85*
51		101.00	71.90	16.20	15.90	2.85	2.00
61		96.40	83.50	43.30	20.50	2.49	0.50
71	*	545.00*	410.00*	53.30*	31.30*	9.28*	7.11*
81		23.90	26.90	3.74	3.12	0.42	0.14
91		62.90	77.70	22.60	23.10	4.60	2.44
101		211.00	164.00	32.50	38.80	3.22	1.63

* = REJECTED
CF = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 54. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR KEPONE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		542.00	419.00	143.00	106.00	14.30	14.10
21		386.00	320.00	131.00	108.00	12.00	8.30
31	*	203.00*	137.00*	23.00*	21.80*	1.80*	1.10*
41		487.00	318.00	132.00	95.60	19.40	13.00
51		381.00	337.00	110.00	87.00	13.90	8.20
61		429.00	365.00	112.00	106.00	14.90	11.50
71		404.00	457.00	200.00*	103.00	10.10	13.40
81		345.00	270.00	130.00	96.00	12.50	11.20
91		352.00	294.00	123.00	87.60	19.90	13.70
101		365.00	307.20	131.00	99.50	14.40	12.70

RAW DATA FOR KEPONE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		258.00	183.00	79.80	60.20	10.40	7.74
21		328.00	265.00	79.30	46.80	6.50	5.60
31	*	76.10*	57.20*	11.30*	7.00*	0.00*	0.00*
41		95.10	92.70	54.80	27.20	4.06	0.00*
51		349.00	179.00	85.90	48.20	*	*
61		411.30	244.00	64.50	69.30	9.14	10.20
71		146.30	130.00	37.60	30.10	6.88	3.82
81		184.00	142.00	51.40	27.10	13.50	6.56
91		157.00	165.00	37.80	25.00	1.03	0.76
101		261.10	196.00	70.20	58.20	6.13	6.27

RAW DATA FOR KEPONE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11	*	762.00*	670.00*	217.00*	161.00*	24.10*	21.70*
21		330.00	304.00	141.00	119.00	12.90	6.50
31	*	207.00*	164.00*	27.00*	17.40*	0.00*	0.00*
41		464.00	290.00	59.20	91.30	12.40	6.69
51		424.00	294.00	107.00	82.90	8.96	6.61
61		377.30	341.00	130.00	93.80	12.80	6.41
71		438.00	348.00	154.00	96.40	17.80	14.90
81		304.00	297.00	122.00	108.00	17.70	14.50
91		412.00	362.00	155.00	114.00	24.70	14.60
101	*	314.00*	64.00*	20.40*	0.36*	0.23*	0.43*

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 55. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 2-METHYLPHENOL IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		398.00	361.00	102.00	60.30	16.00	10.70
21		4.37*	339.00	162.00	115.00	18.70	13.60
31		267.00	307.00	138.00	97.40	12.70	12.00
41		385.00	252.00	120.00	94.20	16.40	13.00
51		438.00	76.20*	173.00	130.00	22.50	23.20
61		408.00	300.30	125.00	86.30	15.60	12.70
71		286.00	290.00	103.00	81.00	11.10	7.62
81		239.00	210.00	109.00	83.50	13.60	11.60
91		413.00	344.00	140.00	104.00	21.10	17.60
101		373.00	267.00	126.00	78.60	17.40	14.20

RAW DATA FOR 2-METHYLPHENOL IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		460.00	294.00	95.40	82.80	26.00	24.20
21	*	439.00*	387.00*	184.00*	150.00*	42.10*	38.50*
31	*	92.40*	135.00*	56.20*	38.70*	4.20*	3.00*
41		415.00	403.00	136.00	94.70	22.70	18.50
51		384.00	319.00	111.00	98.20	18.90	14.40
61		361.00	332.00	134.00	101.00	21.30	10.40
71		317.00	282.00	118.00	79.30	27.90	22.20
81	*	198.00*	111.00*	96.70*	75.70*	12.80*	2.66*
91		390.00	374.00	136.00	106.00	24.60	23.10
101		310.00	247.00	126.00	74.80	28.00	25.30

RAW DATA FOR 2-METHYLPHENOL IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		341.00	274.00	91.80	85.60	14.30	10.90
21		406.00	343.00	142.00	111.00	18.20	10.00
31		281.00	244.00	115.00	95.30	17.80	13.30
41	*	369.00*	363.00*	134.00*	106.00*	19.10*	18.20*
51		318.00	243.00	82.40	65.90	7.12	13.80
61		373.00	325.00	138.00	88.50	18.90	16.10
71		308.00	250.00	97.80	74.30	13.30	10.80
81	*	217.00*	186.00*	106.00*	78.00*	13.80*	8.93*
91		410.00	307.00	126.00	99.30	20.70	15.00
101		342.00	295.00	122.00	91.50	17.00	16.00

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 56. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR ACETOPHENONE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	12.00	9.60
LAB/AN	LAB REJECTED						
11		392.00	359.00	84.00	50.30	9.00	6.04
21		371.00	322.00	126.00	96.30	11.20	7.60
31		349.00	342.00	98.70	74.20	6.60	5.80
41		454.00	296.00	107.00	92.90	10.60	8.67
51		484.00	209.00	142.00	120.00	13.90	11.70
61		428.00	306.00	105.00	78.40	10.30	8.00
71		375.00	321.00	101.00	79.20	7.63	5.95
81		337.00	262.00	94.30	86.90	9.40	7.15
91		394.00	330.00	105.00	83.00	10.70	8.69
101		367.00	291.00	104.00	73.40	10.60	8.14

RAW DATA FOR ACETOPHENONE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	12.00	9.60
LAB/AN	LAB REJECTED						
11		470.00	389.00	102.00	75.20	14.60	9.39
21		341.00	295.00	120.00	103.00*	19.00	15.70
31		469.00	329.00	92.40	74.30	8.00	4.40
41		466.00	477.00	110.00	80.20	6.89	3.99
51		235.00	207.00	97.00	76.80	14.90	10.80
61		407.00	362.00	106.00	83.60	11.30	7.68
71		372.00	328.00	96.60	83.00	12.60	10.20
81		305.00	255.00	88.00	73.10	14.00	7.72
91		225.00	315.00	48.90*	77.10	12.20	8.73
101		365.00	325.00	98.40	91.60	15.10	12.30

RAW DATA FOR ACETOPHENONE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	12.00	9.60
LAB/AN	LAB REJECTED						
11		343.00	275.00	71.20	73.80	8.48	5.61
21		435.00	333.00	114.00	95.10	11.40	7.10
31		330.00	263.00	89.90	78.90	9.30	6.40
41	*	462.00*	435.00*	117.00*	105.00*	13.10*	11.40*
51	*	260.00*	184.00*	76.80*	66.20*	5.00*	7.30*
61		412.00	351.00	113.00	80.70	12.10	9.27
71		371.00	298.00	97.70	76.80	7.63	5.10
81		289.00	248.00	89.80	72.30	11.10	6.70
91		392.00	268.00	104.00	76.30	11.30	7.67
101		356.00	302.00	98.40	89.60	10.70	8.38

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 57. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR N-NITROSOPIPERIDINE IN REAGENT WATER

INCREMENT IN UG/L		AMPUL 1 480.00	AMPUL 2 400.00	AMPUL 3 120.00	AMPUL 4 96.00	AMPUL 5 12.00	AMPUL 6 9.60
LAB/AN	LAB REJECTED						
11		458.00	409.00*	96.10	60.10	9.70	5.85
21		346.00	348.00	92.70	82.60	10.70	7.60
31		489.00	374.00	111.00	90.40	9.00	7.90
41	*	568.00*	354.00*	138.00*	113.00*	13.10*	10.30*
51		443.00	348.00	117.00	84.70	10.80	8.45
61		488.00	365.00	124.00	93.40	11.40	8.77
71		414.00	352.00	99.20	79.00	10.70	9.32
81	*	383.00*	296.00*	90.00*	86.90*	8.74*	5.80*
91		426.00	349.00	111.00	87.60	11.30	8.68
101		623.00	503.00*	138.00	119.00	11.00	7.99

RAW DATA FOR N-NITROSOPIPERIDINE IN GROUND WATER

INCREMENT IN UG/L		AMPUL 1 480.00	AMPUL 2 400.00	AMPUL 3 120.00	AMPUL 4 96.00	AMPUL 5 12.00	AMPUL 6 9.60
LAB/AN	LAB REJECTED						
11		502.00	382.00	103.00	74.80	12.90	8.20
21		328.00	327.00	134.00	1.20*	14.20	15.90
31	*	327.00*	254.00*	92.80*	75.50*	10.20*	7.60*
41	*	575.00*	320.00*	136.00*	114.00*	13.30*	9.65*
51		330.00	380.00	105.00	66.90	12.60	8.26
61		426.00	386.00	116.00	99.20	12.40	8.50
71		461.00	365.00	112.00	92.00	20.30	15.40
81		368.00	298.00	99.10	77.20	11.10	6.79
91		301.00	367.00	72.90	93.50	17.80	18.70
101		489.00	398.00	113.00	107.00	11.70	9.97

RAW DATA FOR N-NITROSOPIPERIDINE IN LEACHATE

INCREMENT IN UG/L		AMPUL 1 480.00	AMPUL 2 400.00	AMPUL 3 120.00	AMPUL 4 96.00	AMPUL 5 12.00	AMPUL 6 9.60
LAB/AN	LAB REJECTED						
11		419.00	330.00	87.60	83.20	9.44	6.03
21		386.00	323.00	130.00	110.00	13.80	9.20
31		375.00	284.00	105.00	77.00	10.70	7.20
41	*	522.00*	490.00*	146.00*	115.00*	16.10*	14.40*
51		367.00	324.00	92.70	64.70	6.47	6.38
61		441.00	393.00	116.00	82.90	12.00	8.65
71		404.00	312.00	94.80	76.60	10.70	8.04
81	*	280.00*	247.00*	79.90*	61.80*	9.00*	5.72*
91		416.00	302.00	110.00	81.80	11.90	7.60
101		450.00	175.00	95.40	89.90	8.70	5.8*

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 58. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR HEXACHLOROPROPENE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	12.00	9.60
LAB/AN	LAB REJECTED						
11		416.00	362.00	69.90	28.90	4.30	3.19
21		367.00	237.00	75.80	54.70	7.00	4.80
31		270.00	211.00	55.40	34.30	2.10	1.80
41	*	552.00*	414.00*	142.00*	120.00*	8.95*	7.35*
51		309.00	265.00	133.00	85.30	5.57	4.03
61		245.00	185.00	61.20	45.20	4.49	3.47
71		302.00	300.00	75.40	64.50	9.16	9.06
81		172.00	151.00	52.30	48.50	4.75	3.65
91		249.00	190.00	61.40	59.60	7.19	5.50
101		388.00	329.00	102.00	82.80	8.37	5.60

RAW DATA FOR HEXACHLOROPROPENE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	12.00	9.60
LAB/AN	LAB REJECTED						
11		270.00	240.00	67.20	49.40	4.93	2.50
21	*	301.00*	448.00*	220.00*	191.00*	80.30*	48.00*
31		278.00	249.00	96.90	74.70	7.30	3.60
41		451.00	419.00	87.90	68.40	5.10	3.63
51		330.00	327.00	24.40	17.00*	2.58	1.34
61		362.00	308.00	78.10	62.20	3.26	6.02
71		312.00	258.00	62.50	59.80	6.30	6.48
81		170.00	187.00	68.00	49.30	7.21	4.37
91	*	113.00*	167.00*	27.20*	23.90*	1.97*	2.68*
101		261.00	238.00	71.60	55.60	2.79	3.82

RAW DATA FOR HEXACHLOROPROPENE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	12.00	9.60
LAB/AN	LAB REJECTED						
11		247.00	178.00	28.50	39.20	2.65	1.76
21		284.00	240.00	64.60	48.20	5.40	3.10
31		225.00	187.00	72.90	66.10	8.60	5.90
41		339.00	315.00	94.10	73.00	5.42	4.33
51		500.00*	375.00	78.50	58.40	2.66	2.61
61	*	437.00*	370.00*	108.00*	73.40*	9.25*	5.48*
71		251.00	226.00	71.90	58.10	7.29	6.49
81		198.00	178.00	67.30	54.70	7.52	4.69
91	*	96.80*	67.00*	22.70*	16.70*	2.28*	1.67*
101		274.00	246.00	64.20	58.30	6.22	4.37

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IN = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 59. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR SAFROLE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		402.00	367.00	113.00	65.40	15.40	11.40
21		420.00	385.00	175.00	124.00	20.90	16.30
31		308.00	270.00	129.00	90.90	14.90	14.60
41		446.00	291.00	141.00	113.00	19.50	18.20
51		300.00	419.00	140.00	95.60	20.00	15.50
61		426.00	305.00	139.00	96.60	17.30	14.50
71		368.00	311.00	118.00	89.20	15.00	15.40
81		290.00	243.00	115.30	98.20	21.50	18.60
91		342.00	288.00	135.30	100.00	21.40	18.70
101		415.00	347.00	153.00	116.00	24.90	18.80

RAW DATA FOR SAFROLE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		423.00	339.00	116.00	79.50	17.50	11.50
21	*	444.00*	396.00*	169.00*	134.00*	28.00*	23.70*
31		294.00	252.00	139.00	114.00	25.10	20.30
41		468.00	400.00	150.00	110.00	21.90	17.80
51		282.00	325.00	101.00	62.10	15.50	12.40
61		385.00	355.00	139.00	104.00	20.60	16.70
71		364.00	297.00	122.00	92.40	19.40	16.20
81		244.00	210.00	93.60	85.60	19.70	16.80
91		211.00	291.00	62.10	93.40	21.00	17.10
101		374.00	313.00	132.00	112.00	21.10	20.10

RAW DATA FOR SAFROLE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		383.00	304.00	104.00	91.20	15.30	11.30
21		407.00	367.00	154.00	123.00	19.80	14.70
31		281.00	235.00	137.00	101.00	28.90	22.50
41		414.00	351.00	146.00	112.00	20.80	24.30
51		300.00	272.00	112.00	73.60	15.10	12.50
61		410.00	361.00	149.00	95.10	20.90	16.40
71		330.00	293.00	110.00	87.00	16.80	13.60
81		243.00	233.00	103.00	78.60	20.10	16.30
91		318.00	234.00	129.00	90.20	21.30	16.10
101		385.00	348.00	128.00	119.00	26.90	22.20

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 60. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 2,4,5-TRICHLOROPHENOL IN REAGENT WATER

INCREMENT IN UG/L		AMPUL 1 480.00	AMPUL 2 400.00	AMPUL 3 200.00	AMPUL 4 160.00	AMPUL 5 80.00	AMPUL 6 46.00
LAB/AN	LAB REJECTED						
11	—						
21		530.00	463.00	164.00	110.00	43.50	24.20
31	*	471.00	414.00	205.00	150.00	53.00	30.00
41		397.00*	307.00*	153.00*	121.00*	40.40*	24.50*
51		423.00	316.00	180.00	164.00	53.60	35.60
61		438.00	350.00	159.00	133.00	48.80	34.20
71		469.00	362.00	194.00	152.00	55.70	29.60
81		392.00	325.00	169.00	137.00	55.00	36.90
91		337.00	298.00	168.00	140.00	55.30	34.90
101	*	469.00*	395.00*	202.00*	160.00*	66.40*	41.00*
		396.00	347.00	163.00	138.00	62.50	39.80

RAW DATA FOR 2,4,5-TRICHLOROPHENOL IN GROUND WATER

INCREMENT IN UG/L		AMPUL 1 480.00	AMPUL 2 400.00	AMPUL 3 200.00	AMPUL 4 160.00	AMPUL 5 82.00	AMPUL 6 46.00
LAB/AN	LAB REJECTED						
11							
21	*	590.00	427.00	154.00	150.00	59.30	41.10
31		495.00*	427.00*	210.00*	176.00*	72.50*	45.70*
41		333.00	285.00	143.00	132.00	49.90*	31.80
51	*	479.00	420.00	177.00	161.00	66.30	42.60
61		230.00*	303.00*	125.00*	86.60*	44.40*	26.20*
71		455.00	416.00	191.00	164.00	62.30	42.20
81		393.00	339.00	177.00	124.00	59.30	34.80
91		343.00	277.00	152.00	129.00	60.40	37.80
101		372.00	364.00	165.00	135.00	61.70	41.30
		331.00	313.00	162.00	148.00	64.20	41.00

RAW DATA FOR 2,4,5-TRICHLOROPHENOL IN LEACHATE

INCREMENT IN UG/L		AMPUL 1 480.00	AMPUL 2 400.00	AMPUL 3 200.00	AMPUL 4 160.00	AMPUL 5 82.00	AMPUL 6 46.00
LAB/AN	LAB REJECTED						
11							
21		459.00	360.00	141.00	121.00	40.70	21.70
31		476.00	429.00	192.00	154.00	53.20	29.90
41		302.00	267.00	162.00	145.00	69.60	48.10
51	*	414.00	357.00	182.00	146.00	56.90	49.10
61		333.00*	247.00*	107.00*	92.90*	26.60*	26.60*
71		408.00	363.00	172.00	120.00	60.10	38.40
81		386.00	298.00	163.00	135.00	48.80	29.70
91		276.00	280.00	167.00	119.00	51.30	31.20
101		454.00	356.00	168.00	143.00	64.30	36.10
		386.00	328.00	156.00	143.00	63.10	43.20

* = REJECTED

CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 61. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 1,4-DINITROBENZENE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	68.00	46.00
LAB/AN	LAB REJECTED						
11		493.00	427.00	170.00	124.00	40.10	21.40
21	*	542.00*	477.00*	254.00*	186.00*	72.20*	45.30*
31	*	360.00*	256.00*	112.00*	45.90*	18.30*	8.60*
41		438.00	305.00	174.00	159.00	57.20	33.90
51		395.00	328.00	143.00	119.00	46.40	28.80
61		497.00	339.00	213.00	154.00	55.30	31.80
71		398.00	316.00	160.00	132.00	55.00	38.00
81		418.00	334.00	153.00	127.00	48.60	28.00
91		480.00	396.00	194.00	157.00	61.20	38.30
101		498.00	382.00	175.00	140.00	59.90	38.40

RAW DATA FOR 1,4-DINITROBENZENE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	68.00	46.00
LAB/AN	LAB REJECTED						
11		511.00	406.00	161.00	132.00	53.70	26.30
21	*	511.00*	448.00*	220.00*	191.00*	80.30*	48.00*
31		447.00	350.00	158.00	137.00	53.90	31.60
41		424.00	380.00	168.00	153.00	58.00	38.00
51	*	265.00*	262.00*	95.20*	83.30*	45.60*	25.30*
61	*	541.00*	490.00*	231.00*	182.00*	59.70*	38.10*
71		430.00	347.00	176.00	138.00	59.20	40.70
81		337.00	262.00	166.00	139.00	56.10	34.20
91		249.00	372.00	82.90*	132.00	53.60	31.10
101		392.00	333.00	169.00	145.00	64.60	36.10

RAW DATA FOR 1,4-DINITROBENZENE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	68.00	46.00
LAB/AN	LAB REJECTED						
11		468.00	378.00	158.00	131.00	39.90	21.90
21	*	554.00*	475.00*	228.00*	186.00*	71.60*	45.50*
31		490.00	396.00	202.00	126.00	68.90	42.90
41		384.00	363.00	183.00	150.00	49.00	43.70
51	*	334.00*	238.00*	118.00*	91.00*	20.10*	20.20*
61		465.00	430.00	213.00	151.00	67.80	33.10
71		388.00	330.00	160.00	129.00	51.50	32.70
81		383.00	317.00	161.00	122.00	50.00	29.10
91		465.00	329.00	191.00	139.00	61.40	35.00
101		414.00	335.00	145.00	136.00	62.80	36.80

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 62. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR PENTACHLOROBENZENE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	12.00	9.60
LAB/AN	LAB REJECTED						
11		390.00	347.00	91.00	60.70*	8.71	6.31
21		374.00	295.00	108.00	89.60	13.30	9.70
31		303.00	265.00	99.50	81.40	8.80	6.20
41		405.00	278.00	97.90	86.80	11.30	8.84
51		328.00	256.00	99.40	77.70	8.90	7.17
61		413.00	323.00	113.00	84.60	10.40	7.99
71		379.00	334.00	105.00	86.40	7.05	4.32
81		371.00	307.00	87.80	76.00	10.10	7.99
91		369.00	301.00	108.00	85.30	10.80	8.90
101		319.00	284.00	99.00	77.40	12.30	9.08

RAW DATA FOR PENTACHLOROBENZENE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	12.00	9.60
LAB/AN	LAB REJECTED						
11		423.00	345.00	92.00	70.40	9.97	5.83
21		337.00	299.00	101.00	83.50	13.00	9.40
31		299.00	271.00	91.70	72.50	9.40	6.70
41		425.00	372.00	116.00	79.30	11.20	8.69
51	*	242.00*	257.00*	73.90*	55.80*	9.67*	6.53*
61		400.00	340.00	94.60	80.70	11.10	8.09
71		404.00	358.00	109.00	86.70	7.01	3.02
81		375.00	315.00	89.80	81.40	9.97	7.19
91		213.00	282.00	46.20*	69.00	10.00	7.47
101		292.00	266.00	89.00	79.20	12.00	9.07

RAW DATA FOR PENTACHLOROBENZENE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	12.00	9.60
LAB/AN	LAB REJECTED						
11		382.00	307.00	85.00	71.20	8.63	5.89
21		349.00	294.00	99.90	83.40	12.40	8.30
31		251.00	207.00	93.20	75.30	12.60	9.10
41		378.00	321.00	99.30	83.60	11.40	11.30
51	*	273.00*	221.00*	69.40*	59.00*	6.81*	6.45*
61		390.00	336.00	102.00	76.20	10.90	8.19
71		374.00	300.00	106.00	80.20	5.49	2.93
81		309.00	301.00	99.40	73.90	10.60	7.21
91		301.00	227.00	84.80	59.70	9.16	6.35
101		289.00	253.00	76.10	72.50	10.90	8.72

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 63. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 2,3,4,6-TETRACHLOROPHENOL IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	68.00	46.00
LAB/AN	LAB REJECTED						
11		500.00	434.00*	177.00	134.00	50.60	33.50
21	*	594.00*	445.00*	252.00*	183.00*	70.60*	45.80*
31	*	290.00*	288.00*	164.00*	121.00*	45.20*	21.60*
41		459.00	335.00	186.00	170.00	56.30	36.80
51		390.00	313.00	144.00	123.00	47.40	31.80
61		472.00	363.00	190.00	157.00	58.90	23.30
71		412.00	360.00	158.00	129.00	45.40	31.10
81		369.00	329.00	163.00	132.00	55.20	33.90
91		418.00	344.00	173.00	131.00	53.60	32.50
101		376.00	358.00	159.00	112.00	63.60	39.90

RAW DATA FOR 2,3,4,6-TETRACHLOROPHENOL IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	68.00	46.00
LAB/AN	LAB REJECTED						
11		525.00	383.00	136.00	130.00	54.50	39.90
21	*	533.00*	451.00*	230.00*	201.00*	88.10*	57.30*
31		327.00	277.00	121.00	117.00	37.10	20.70
41		488.00	437.00	171.00	164.00	69.30	43.70
51	*	134.00*	239.00*	84.30*	61.20*	29.80*	16.00*
61		448.00	404.00	186.00	164.00	51.70	42.30
71		328.00	320.00	123.00	97.30	40.20	11.90
81		444.00	328.00	171.00	136.00	62.10	40.20
91		402.00	374.00	171.00	140.00	60.60	36.10
101		274.00	240.00	131.00	113.00	54.80	35.70

RAW DATA FOR 2,3,4,6-TETRACHLOROPHENOL IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	68.00	46.00
LAB/AN	LAB REJECTED						
11		469.00	379.00	160.00	133.00	47.70	29.30
21	*	591.00*	493.00*	223.00*	192.00*	77.00*	45.20*
31		340.00	297.00	175.00	155.00	69.10	46.90
41		417.00	375.00	184.00	149.00	50.80	47.80
51	*	331.00*	237.00*	115.00*	96.00*	29.90*	27.60*
61		387.00	342.00	166.00	102.00	56.10	30.10
71		384.00	266.00	145.00	118.00	45.10	25.00
81		338.00	290.00	163.00	114.00	53.90	34.10
91		411.00	328.00	121.00	122.00	49.70	25.00
101		324.00	278.00	126.00	130.00	58.90	37.60

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 64. STUDY 35, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR DIPHENYLAMINE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	12.00	9.60
LAB/AN	LAB REJECTED						
11		512.00*	458.00	124.30	99.60	10.90	8.38
21	*	445.00*	353.00*	138.00*	116.00*	14.60*	10.60*
31		440.00	251.00	93.30	75.30	8.40	6.20
41		440.00	267.00	102.00	86.30	10.70	8.12
51		276.00*	266.00	101.00	78.30	8.83	7.60
61		452.00	358.00	126.00	93.80	11.40	8.82
71		415.00	350.00	96.70	75.90	6.58	4.74
81	*	296.00*	219.00*	80.70*	68.10*	7.62*	6.19*
91		431.00	355.00	154.00	95.80	13.00	9.77
101	*	326.00*	221.00*	68.60*	43.10*	6.96*	4.83*

RAW DATA FOR DIPHENYLAMINE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	12.00	9.60
LAB/AN	LAB REJECTED						
11	*	889.00*	589.00*	139.00*	109.00*	14.40*	9.29*
21		401.00	346.00	152.00	128.00	20.30*	16.70*
31		276.00	229.00	98.70	78.40	11.80	9.30
41		504.00	393.00	149.00	91.60	11.60	8.34
51		346.00	263.00	106.00	65.60	10.20	7.31
61		510.00	449.00	125.00	99.30	12.20	8.72
71		370.00	351.00	91.90	87.70	9.65	6.04
81		384.00	304.00	103.00	87.30	12.70	8.76
91		243.00	372.00	51.50	85.40	12.10	8.99
101		450.00	378.00	114.00	93.30	13.70	10.20

RAW DATA FOR DIPHENYLAMINE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	12.00	9.60
LAB/AN	LAB REJECTED						
11		509.00	404.00	116.00	90.30	10.90	7.60
21		384.00	323.00	137.00	120.00*	18.70	10.20
31		277.00	248.00	93.60	80.00	13.70	10.00
41		405.00	342.00	119.00	86.90	11.00	10.80
51	*	347.00*	268.00*	87.00*	72.00*	7.64*	7.87*
61		513.00	415.00	129.00	99.50	12.20	8.80
71		382.00	293.00	93.90	81.70	7.73	4.70
81		376.00	318.00	104.00	79.80	9.65	7.18
91		451.00	291.00	117.00	84.60	12.40	8.23
101		542.00	416.00	115.00	93.60	12.90	9.54

* = REJECTED

CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 65. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR PENTACHLORONITROBENZENE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	68.00	46.00
LAB/AN	LAB REJECTED						
11		435.00	374.00	166.00	123.00	51.20	36.40
21	*	491.00*	365.00*	187.00*	162.00*	72.90*	52.20*
31		530.00	322.00	173.00	120.00	39.10	21.60
41		456.00	287.00	170.00	134.00	58.00	41.10
51	*	298.00*	271.00*	130.00*	107.00*	38.60*	27.80*
61		427.00	330.00	190.00	147.00	56.30	39.30
71		417.00	356.00	161.00	143.00	49.30	33.00
81		397.00	291.00	146.00	134.00	48.10	34.40
91		382.00	334.00	229.00	148.00	63.20	47.50
101	*	303.00*	222.00*	99.60*	74.30*	36.40*	22.60*

RAW DATA FOR PENTACHLORONITROBENZENE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	68.00	46.00
LAB/AN	LAB REJECTED						
11		600.00	406.00	159.00	124.00	55.00	30.00
21	*	451.00*	374.00*	194.00*	165.00*	79.60*	56.50*
31		319.00	247.00	115.00	102.00	44.00	33.30
41		468.00	373.00	207.00	142.00	56.00	38.30
51	*	334.00*	316.00*	97.40*	79.20*	37.60*	29.80*
61		397.00	351.00	164.00	139.00	56.60	34.60
71		391.00	355.00	149.00	142.00	51.30	26.30
81		397.00	302.00	159.00	139.00	55.80	35.10
91		235.00	327.00	80.00	129.00	61.80	39.90
101		373.00	318.00	142.00	126.00	54.00	41.30

RAW DATA FOR PENTACHLORONITROBENZENE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	68.00	46.00
LAB/AN	LAB REJECTED						
11		422.00	335.00	160.00	133.00	52.80	33.40
21	*	471.00*	369.00*	135.00*	168.00*	76.90*	49.10*
31		333.00	297.00	159.00	140.00	49.20	34.10
41		381.00	329.00	194.00	143.00	58.20	37.10
51	*	344.00*	244.00*	103.00*	99.00*	37.70*	32.30*
61		424.00	381.00	185.00	141.00	61.60	35.50
71		376.00	300.00	158.00	135.00	50.30	27.40
81		399.00	321.00	171.00	141.00	56.40	37.90
91		411.00	262.00	169.00	131.00	62.20	38.30
101		401.00	370.00	119.00	122.00	60.60	43.40

* = REJECTED

CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 66. STUDY 38, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 2-SEC-BUTYL- 4,6-DINITROPHENOL IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	68.00	46.00
LAB/AN	LAB REJECTED						
11		587.00	484.00	147.00	147.00	51.40	33.80
21	*	689.00*	519.00*	260.00*	206.00*	71.40*	41.10*
31	*	401.00*	154.30*	63.40*	33.30*	7.40*	2.70*
41		485.00	323.00	202.00	175.00	49.40	26.70
51		436.00	379.00	139.00	118.00	39.40	23.40
61		514.00	304.00	167.00	122.00	33.70	8.47
71		412.00	350.00	152.00	141.00	50.10	34.40
81		356.00	256.00	152.00	131.00	35.60	21.30
91		483.00	398.00	250.00	157.00	64.90	40.80
101	*	281.00*	257.00*	99.20*	53.70*	29.10*	16.30*

RAW DATA FOR 2-SEC-BUTYL- 4,6-DINITROPHENOL IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	68.00	46.00
LAB/AN	LAB REJECTED						
11		572.00	380.00	119.00	99.80	39.20	31.40
21	*	619.00*	531.00*	268.00*	223.00*	94.30*	61.40*
31	*	350.00*	244.00*	84.90*	73.40*	13.00*	6.60*
41		372.00	390.00	174.00	140.00	40.10	23.60
51	*	319.00*	308.00*	139.00*	59.20*	31.40*	16.60*
61		550.00	584.00*	275.00	211.00	46.40	31.70
71		359.00	334.00	159.00	120.00	56.70	33.10
81		473.00	376.00	157.00	154.00	55.90	31.30
91		403.00	410.00	122.00	132.00	45.00	24.80
101		490.00	384.00	193.00	135.00	52.10	30.60

RAW DATA FOR 2-SEC-BUTYL- 4,6-DINITROPHENOL IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	68.00	46.00
LAB/AN	LAB REJECTED						
11		549.00	440.00	166.00	136.00	37.60	22.90
21	*	693.00*	539.00*	249.00*	212.00*	76.40*	37.80*
31		429.00	330.00	115.00	91.30	26.00	12.10
41		360.00	377.00	229.00	153.00	37.20	32.40
51	*	409.00*	235.00*	101.00*	81.80*	18.70*	18.20*
61		597.00	549.00	247.00	147.00	60.30	22.30
71		370.00	331.00	162.00	129.00	49.60	28.00
81		415.00	312.00	109.00	115.00	36.60	24.60
91		522.00	366.00	148.00	144.00	62.20	36.40
101		765.00	378.00	206.00	166.00	53.90	25.70

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 67. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 7,12-DIMETHYLBENZ(A)ANTHRACENE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11	*	2060.00*	430.00*	173.00*	88.60*	10.60*	11.40*
21		590.00	337.00	48.80	36.40	0.00*	0.00*
31		98.10	128.00	37.50	24.80	3.60	4.10
41		226.00	98.10	15.20	14.20	1.70	2.29
51		677.00	319.00	47.00	25.10	*	*
61		350.00	324.00	112.00	79.20	9.64	7.97
71		103.00	93.90	57.70	52.80	32.70	32.40
81		526.00	340.00	39.10	18.70	1.89	1.95
91		300.00	249.00	55.60	42.60	10.80	9.37
101		291.00	301.00	104.00	86.70	21.00	16.40

RAW DATA FOR 7,12-DIMETHYLBENZ(A)ANTHRACENE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		220.00	142.00	54.60	32.00	3.08	1.17
21	*	177.00*	66.90*	6.60*	0.00*	0.00*	0.00*
31		136.00	131.00	40.20	34.90	5.90	3.50
41		132.00	105.00	11.50	8.41	1.14	1.22
51	*	769.00*	750.00*	115.00*	143.00*	35.90*	19.40*
61		349.00	289.00	75.10	65.60	13.00	5.40
71		34.20	35.70	*	*	*	*
81		305.00	127.00	23.50	16.70	1.69	0.93
91		207.00	232.00	39.20	64.00	15.50	14.00
101		331.00	310.00	90.30	81.70	14.40	15.00

RAW DATA FOR 7,12-DIMETHYLBENZ(A)ANTHRACENE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		2770.00*	396.00	106.00	78.80	7.02	5.21
21		346.00	232.00	46.00	39.50	0.00*	0.00*
31		179.00	158.00	52.00	44.10	8.20	7.50
41	*	201.00*	120.00*	14.60*	13.40*	0.00*	0.00*
51		623.00	125.00	42.80	41.90	*	*
61		356.00	312.00	85.30	63.90	8.56	8.38
71		74.40	41.10	43.00	36.90	*	*
81		683.00	445.00	61.80	57.20	3.77	3.81
91		367.00	259.00	99.90	73.00	14.10	10.40
101		320.00	247.00	141.00	96.80	18.40	13.40

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 68. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR 3-METHYCHOLANTHRENE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		256.00	208.00	114.00	80.80	17.70	13.70
21	*	61000.00*	44000.00*	18600.00*	12300.00*	662.00*	558.00*
31	*	56.30*	201.00*	40.90*	26.30*	2.40*	1.60*
41		10700.00	7070.00	3380.00	2760.00	267.00	333.00
51		107.00	90.40	31.80	35.80	7.37	7.32
61		4130.00	3740.00	1350.00	1050.00	142.00	112.00
71		1434.00	1392.00	122.00	70.90	*	*
81		9790.00	8640.00	1410.00	532.00	57.10	90.00
91		8160.00	6830.00	2700.00	1990.00	345.00	300.00
101		140.00	121.00	48.40	31.60	3.94	2.53

RAW DATA FOR 3-METHYCHOLANTHRENE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		272.00	222.00	89.30	70.30	12.40	8.62
21	*	66300.00*	53000.00*	15300.00*	10600.00*	906.00*	598.00*
31		220.00	195.00	61.80	44.00	3.50	1.70
41		12900.00	11600.00	951.00	1650.00	425.00	375.00
51	*	104.00*	88.50*	40.50*	26.40*	6.97*	3.71*
61		3790.00	3130.00	1020.00	873.00	145.00	92.00
71		3357.00	3323.00	457.00	655.00	114.00	89.20
81		11200.00	8640.00	3090.00	2410.00	424.00	300.00
91		4700.00	6130.00	1510.00	2110.00	401.00	324.00
101	*	113.00*	78.10*	21.90*	17.30*	2.14*	1.51*

RAW DATA FOR 3-METHYCHOLANTHRENE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		235.00	196.00	96.00	70.60	16.20	13.70
21	*	57400.00*	47400.00*	18800.00*	15000.00*	754.00*	679.00*
31		283.00	224.00	57.30	46.20	4.80	3.70
41		4000.00	3050.00	2780.00	2080.00	137.00	183.00
51		146.00	153.00	46.90	36.00	14.50	14.40
61		5250.00	4830.00	1460.00	1200.00	183.00	162.00
71		2283.00	1701.00	125.00	126.00	*	*
81		13200.00	10400.00	3470.00	2420.00	36.10	25.80
91		8090.00	5340.00	3060.00	1960.00	400.00	298.00
101	*	235.00*	135.00*	71.30*	45.80*	5.00*	3.42*

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 69. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR DIBENZO(A,E)PYRENE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	69.00	46.00
LAB/AN	LAB REJECTED						
11	*	2070.00*	2620.00*	572.00*	238.00*	216.00*	110.00*
21	*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
31		363.00	328.00	89.90	48.80	6.60	0.63
41		458.00	408.00	282.00	281.00	64.80	44.70
51		192.00	186.00	53.30	127.00	42.70	33.40
61		626.00	614.00	274.00	218.00	76.00	31.40
71	*	*	*	*	604.00*	*	*
81		376.00	226.00	185.00	60.50	41.00	1.90
91		537.00	563.00	225.00	213.00	91.50	58.50
101		746.00	682.00	280.00	236.00	96.30	52.50

RAW DATA FOR DIBENZO(A,E)PYRENE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	68.00	46.00
LAB/AN	LAB REJECTED						
11		756.00	441.00	236.00	126.00	48.10	23.10
21	*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
31		506.00	333.00	92.90	24.40	0.00*	0.00*
41		741.00	732.00	152.00	165.00	94.90*	54.60
51		342.00	349.00	146.00	55.50	26.50*	17.20
61		648.00	309.00	163.00	186.00	49.80	33.20
71	*	*	1293.00*	1059.00*	445.00*	210.00*	*
81		499.00	195.00	186.00	75.60	46.20	*
91		271.00	515.00	54.90	112.00	49.70	8.50
101		399.00	296.00	119.00	119.00	43.80	31.40

RAW DATA FOR DIBENZO(A,E)PYRENE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	200.00	160.00	68.00	46.00
LAB/AN	LAB REJECTED						
11		447.00	606.00	247.00	180.00	11.10	8.80
21	*	0.00*	0.00*	0.00*	0.00*	0.00*	0.00*
31		532.00	398.00	118.00	86.80	0.92	5.90
41		420.00	623.00	240.00	293.00	99.00	76.20
51		205.00	63.90	102.00	145.00	22.00	18.10
61		736.00	755.00	247.00	205.00	102.00	52.10
71		*	2634.00	1249.00	214.00	89.40	*
81		2820.00*	1740.00	1080.00	420.00	272.00*	14.60
91		778.00	361.00	315.00	241.00	117.00	59.30
101		392.00	580.00	249.00	193.00	73.10	45.30

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 70. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

RAW DATA FOR ETHYL METHANE SULFONATE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	12.00	9.60
LAB/AN	LAB REJECTED						
11		373.00	342.00	79.50	47.30	8.38	5.56
21		473.00	283.00	126.00	93.90	10.00	6.80
31	*	259.00*	240.00*	74.10*	49.20*	4.00*	3.20*
41		446.00	290.00	104.00	89.10	11.80	9.04
51		322.00	273.00	103.00	81.50	9.68	7.62
61		410.00	277.00	106.00	78.50	9.84	8.37
71		350.00	301.00	94.20	73.50	11.80	10.40
81		368.00	308.00	88.20	75.90	8.23	5.14
91		369.00	328.00	101.00	81.70	10.80	8.13
101		447.00	318.00	102.00	65.60	9.42	7.35

RAW DATA FOR ETHYL METHANE SULFONATE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	12.00	9.60
LAB/AN	LAB REJECTED						
11		423.00	358.00	92.40	67.80	10.40	6.97
21		326.00	385.00	121.00	101.00	12.90	9.10
31		534.00	417.00	123.00	99.20	11.00	6.20
41		460.00	443.00	102.00	80.50	12.30	11.80
51	*	325.00*	292.00*	86.30*	64.00*	11.00*	6.91*
61		481.00	413.00	117.00	86.00	12.40	8.74
71		389.00	323.00	95.90	93.50	15.20	12.30
81		474.00	376.00	115.00	98.70	13.40	8.80
91		296.00	354.00	70.30	79.30	10.90	8.11
101		389.00	348.00	102.00	87.20	9.72	8.01

RAW DATA FOR ETHYL METHANE SULFONATE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	12.00	9.60
LAB/AN	LAB REJECTED						
11	*	319.00*	243.00*	64.00*	67.20*	7.31*	5.30*
21		322.00	320.00	113.00*	91.20	10.50	6.20
31		387.00	326.00	92.10	84.70	9.90	6.80
41	*	420.00*	387.00*	110.00*	89.80*	12.90*	12.00*
51	*	289.00*	227.00*	75.60*	56.50*	5.09*	5.30*
61		397.00	359.00	94.70	77.30	11.50	9.22
71		371.00	280.00	92.40	70.60	11.90	9.78
81		349.00	283.00	91.60	76.20	10.20	4.81
91		388.00	274.00	96.20	72.30	10.80	6.88
101		425.00	354.00	96.80	81.50	9.38	7.12

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 72. STUDY 16,SW 846 METHOD 8270,SEMI-VOLATILES,GC-MS

RAW DATA FOR 1,2-DINITROBENZENE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		404.00	382.00	139.00	93.50	13.50	10.50
21	*	533.00*	447.00*	194.00*	132.00*	21.10*	17.90*
31	*	346.00*	258.00*	90.20*	55.40*	5.90*	3.50*
41		460.00	316.00	149.00	120.00	17.70	16.20
51		434.00	362.00	139.00	97.80	17.40	15.20
61		473.00	336.00	171.00*	118.00	21.70	17.70
71		381.00	309.00	136.00	103.00	20.10	17.10
81		427.00	347.00	132.00	95.80	17.90	13.00
91		447.00	366.00	150.00	111.00	20.80	17.00
101		474.00	404.00	141.00	110.00	17.70	14.10

RAW DATA FOR 1,2-DINITROBENZENE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		480.00	374.00	130.00	96.30	19.10	11.80
21	*	478.00*	416.00*	169.00*	125.00*	24.00*	18.80*
31		239.00	300.00	109.00	98.80	17.00	12.60
41		445.00	411.00	139.00	123.00	22.40	17.90
51		200.00	263.00	80.10	65.80	17.10	20.20
61		476.00	427.00	159.00	118.00	20.70	18.10
71		474.00	354.00	167.00	110.00	22.90	20.10
81	*	240.00*	182.00*	77.40*	54.20*	10.30*	8.09*
91		245.00	290.00	68.20	94.50	19.70	15.80
101		389.00	333.00	139.00	113.00	18.90	15.70

RAW DATA FOR 1,2-DINITROBENZENE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	160.00	120.00	24.00	20.00
LAB/AN	LAB REJECTED						
11		433.00	330.00	128.00	98.00	14.80	11.20
21	*	529.00*	468.00*	174.00*	132.00*	23.40*	16.30*
31	*	451.00*	405.00*	163.00*	122.00*	24.50*	21.50*
41		450.00	375.00	166.00	121.00	17.00	20.40
51	*	318.00*	253.00*	117.00*	83.60*	9.00*	11.90*
61		394.00	362.00	144.00	98.40	19.30	14.40
71		399.00	348.00	130.00	97.50	19.80	15.90
81		400.00	347.00	146.00	93.40	19.70	17.00
91		326.00	306.00	145.00	98.20	20.30	14.80
101		398.00	366.00	118.00	111.00	19.00	12.80

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

TABLE 74. STUDY 36,SW 946 METHOD 8270,SEMI-VOLATILES,GC-MS

RAW DATA FOR DIALLATE IN REAGENT WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	12.00	9.60
LAB/AN	LAB REJECTED =						
11		460.00	403.00	103.00	74.10	9.05	7.76
21	*	426.00*	339.00*	140.00*	112.00*	14.50*	10.50*
31	*	283.00*	225.00*	86.10*	64.20*	7.10*	4.90*
41		391.00	232.00	91.60	77.60	10.70	7.98
51		278.00	246.00	85.90	67.40	8.08	6.55
61		427.00	331.00	116.00	87.40	10.70	8.09
71		381.00	320.00	92.20	81.10	9.82	7.91
81		296.00	234.00	88.40	76.10	8.22	6.41
91		388.00	315.00	131.00	80.40	10.80	8.79
101	*	330.00*	223.00*	55.10*	41.20*	5.40*	3.71*

RAW DATA FOR DIALLATE IN GROUND WATER

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	12.00	9.60
LAB/AN	LAB REJECTED						
11		583.00	433.00	97.60	74.90	10.40	6.03
21	*	447.00*	379.00*	146.00*	124.00*	18.90*	14.30*
31		351.00	292.00	101.00	77.20	10.00	7.10
41		482.00	353.00	134.00	80.30	11.20	7.89
51		362.00	304.00	79.70	50.40*	7.98*	6.86
61		433.00	366.00	101.00	80.50	10.80	7.92
71		338.00	321.00	84.40	83.80	11.70	8.25
81		358.00	265.00	92.30	73.80	10.10	6.89
91		222.00	332.00	46.60	75.60	11.20	8.00
101		459.00	356.00	108.00	87.90	11.20	8.59

RAW DATA FOR DIALLATE IN LEACHATE

		AMPUL 1	AMPUL 2	AMPUL 3	AMPUL 4	AMPUL 5	AMPUL 6
INCREMENT IN UG/L		480.00	400.00	120.00	96.00	12.00	9.60
LAB/AN	LAB REJECTED						
11		444.00	347.00	95.20	76.90	10.20	6.98
21		403.00	331.00	133.00	117.00	17.00*	9.40
31		358.00	330.00	117.00	98.20	12.70	9.30
41		396.00	343.00	110.00	82.00	11.90	10.10
51	*	348.00*	253.00*	71.10*	56.20*	6.00*	5.69*
61		426.00	349.00	103.00	75.70	10.40	7.86
71		371.00	275.00	95.50	76.00	9.69	7.24
81		284.00	239.00	94.10	85.00	9.81	7.49
91		402.00	249.00	96.80	71.70	11.00	7.70
101		581.00	429.00	101.00	90.20	10.70	7.90

* = REJECTED
CT = CONCENTRATION, DM = DIFFERENT METHOD, IM = IMPROPER METHOD, UD = UNACCEPTABLE DATA, < = LESS THAN

CURRENT SIGNIFICANCE LEVELS: 1. LAB RANKING DATA REJECTION TESTS, ALPHA =0.05
2. INDIVIDUAL OUTLIER TESTS USING THOMPSON(S) RULE, ALPHA =0.05

APPENDIX C

STATISTICAL SUMMARIES

TABLE 76. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR N-NITROSOMETHYLETHYLAMINE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	9	8	8	8	7	7
TRUE CONC (C) UG/L	13.60	9.60	13.60	9.60	13.60	9.60
MEAN RECOVERY (X)	7.82	5.52	11.11	7.07	8.76	5.98
% RECOVERY	57.51	57.51	81.67	73.66	64.40	62.26
OVERALL STD DEV (S)	2.14	2.48	2.26	1.99	3.24	2.12
OVERALL REL STD DEV, %	27.37	44.95	20.37	27.96	37.03	35.51
SINGLE STD DEV, (SR)	1.16		1.00		1.01	
ANALYST REL DEV, %	17.43		10.97		13.73	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	8	6	8	8	7	7
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	83.54	69.90	89.24	78.34	85.57	69.20
% RECOVERY	69.61	72.81	74.36	81.60	71.31	72.08
OVERALL STD DEV (S)	27.62	1.49	9.72	6.29	13.74	11.09
OVERALL REL STD DEV, %	33.07	2.13	10.89	8.03	14.06	16.03
SINGLE STD DEV, (SR)	16.93		5.69		6.08	
ANALYST REL DEV, %	22.06		6.79		7.86	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	8	8	8	8	7	7
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	380.38	296.38	393.38	288.25	367.00	299.29
% RECOVERY	79.24	74.09	81.95	72.06	76.46	74.82
OVERALL STD DEV (S)	122.69	82.06	51.74	63.45	50.15	36.83
OVERALL REL STD DEV, %	32.26	27.69	13.15	22.01	13.67	12.31
SINGLE STD DEV, (SR)	32.24		45.72		33.13	
ANALYST REL DEV, %	9.53		13.42		9.94	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 77. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR N-NITROSODIETHYLAMINE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	9	9	10	10	9	9
TRUE CONC (C) UG/L	13.60	9.60	13.60	9.60	13.60	9.60
MEAN RECOVERY (X)	9.60	5.79	10.83	7.34	8.77	5.82
% RECOVERY	70.57	60.30	79.65	76.49	64.47	60.64
OVERALL STD DEV (S)	2.96	2.24	2.32	2.08	3.20	2.22
OVERALL REL STD DEV, %	30.89	38.65	26.05	28.38	36.47	38.10
SINGLE STD DEV, (SR)	1.02		0.90		0.95	
ANALYST REL DEV, %	13.31		9.85		12.99	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	9	9	10	10	9	9
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	99.43	81.29	95.28	83.33	98.18	74.56
% RECOVERY	82.86	84.68	79.40	86.80	81.81	77.66
OVERALL STD DEV (S)	18.17	13.46	11.94	10.01	14.24	7.61
OVERALL REL STD DEV, %	18.27	16.56	12.53	12.01	14.51	10.20
SINGLE STD DEV, (SR)	7.11		4.48		7.28	
ANALYST REL DEV, %	7.87		5.01		8.43	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	7	9	10	10	8	9
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	390.86	331.33	414.10	309.70	396.25	352.78
% RECOVERY	81.43	82.83	86.27	77.42	82.55	88.19
OVERALL STD DEV (S)	15.09	94.77	61.72	65.75	55.65	79.02
OVERALL REL STD DEV, %	3.86	28.60	14.91	21.23	14.04	22.40
SINGLE STD DEV, (SR)	20.76		48.88		26.43	
ANALYST REL DEV, %	5.75		13.51		7.06	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 78. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR ANILINE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	7	7	9	9	9	9
TRUE CONC (C) UG/L	13.60	9.60	13.60	9.60	13.60	9.60
MEAN RECOVERY (X)	8.32	5.52	9.81	6.61	10.06	6.66
% RECOVERY	61.21	57.53	72.16	68.89	73.94	69.34
OVERALL STD DEV (S)	1.63	0.96	3.13	2.51	2.10	1.28
OVERALL REL STD DEV, %	19.54	17.32	31.93	37.88	20.94	19.20
SINGLE STD DEV, (SR)	0.96		1.28		1.15	
ANALYST REL DEV, %	13.91		15.55		13.71	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	8	7	9	9	9	9
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	83.36	67.00	87.40	79.17	99.30	77.11
% RECOVERY	69.47	69.79	72.38	82.47	82.75	80.32
OVERALL STD DEV (S)	16.18	5.04	7.43	8.76	12.95	7.27
OVERALL REL STD DEV, %	19.41	8.42	8.50	11.06	13.04	9.43
SINGLE STD DEV, (SR)	8.05		8.32		7.14	
ANALYST REL DEV, %	10.71		9.99		8.10	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	8	8	9	9	9	9
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	315.88	251.47	361.67	282.44	386.89	323.44
% RECOVERY	65.81	62.87	75.35	70.61	80.60	80.86
OVERALL STD DEV (S)	88.23	80.95	49.06	49.01	83.88	60.52
OVERALL REL STD DEV, %	27.93	32.19	13.56	17.35	21.68	18.71
SINGLE STD DEV, (SR)	17.20		44.31		32.17	
ANALYST REL DEV, %	6.06		13.76		9.06	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 79. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR N-NITROSOPYRROLIDINE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	8	8	7	7	9	9
TRUE CONC (C) UG/L	13.60	9.60	13.60	9.60	13.60	9.60
MEAN RECOVERY (X)	7.64	5.08	10.34	7.57	9.42	6.08
% RECOVERY	56.16	52.93	76.03	78.81	69.26	63.32
OVERALL STD DEV (S)	2.00	2.13	2.18	1.37	1.53	1.18
OVERALL REL STD DEV, %	26.13	41.97	21.09	18.16	16.20	19.48
SINGLE STD DEV, (SR)	0.85		1.10		0.96	
ANALYST REL DEV, %	13.31		12.34		12.38	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	8	8	8	9	9	9
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	87.24	70.99	88.41	76.87	97.67	73.28
% RECOVERY	72.70	73.95	73.68	80.07	81.39	76.33
OVERALL STD DEV (S)	15.88	11.96	15.84	19.03	18.45	10.21
OVERALL REL STD DEV, %	18.20	16.84	17.92	23.46	18.89	13.94
SINGLE STD DEV, (SR)	7.60		8.39		8.37	
ANALYST REL DEV, %	9.61		10.15		9.80	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	8	8	9	9	9	9
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	364.25	279.88	416.44	289.89	443.56	355.33
% RECOVERY	75.89	69.97	86.76	72.47	92.41	88.83
OVERALL STD DEV (S)	119.72	83.71	117.76	82.59	130.53	98.91
OVERALL REL STD DEV, %	32.87	29.91	28.28	26.49	29.43	27.84
SINGLE STD DEV, (SR)	27.14		81.39		39.40	
ANALYST REL DEV, %	8.43		23.05		9.86	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 80. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR A,A-DIMETHYLPHENETHYLAMINE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	9	9	7	7	9	9
TRUE CONC (C) UG/L	24.00	20.00	24.00	20.00	24.00	20.00
MEAN RECOVERY (X)	11.91	11.15	8.47	7.51	8.41	5.90
% RECOVERY	49.62	55.76	35.30	37.56	35.02	29.48
OVERALL STD DEV (S)	5.49	4.49	6.58	5.78	5.31	5.26
OVERALL REL STD DEV, %	46.10	40.26	77.64	76.88	63.16	89.22
SINGLE STD DEV, (SR)	3.91		1.79		2.95	
ANALYST REL DEV, %	33.93		22.41		41.27	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	9	9	8	6	9	9
TRUE CONC (C) UG/L	160.00	120.00	160.00	120.00	160.00	120.00
MEAN RECOVERY (X)	175.40	113.08	97.33	65.13	134.92	87.12
% RECOVERY	109.62	94.23	60.83	54.28	84.33	72.60
OVERALL STD DEV (S)	73.74	54.08	56.24	48.81	43.76	41.47
OVERALL REL STD DEV, %	42.04	47.83	57.78	74.95	32.43	47.60
SINGLE STD DEV, (SR)	38.28		27.25		24.76	
ANALYST REL DEV, %	26.54		33.55		22.31	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	8	8	7	5	9	9
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	421.63	380.13	409.04	366.80	407.78	361.78
% RECOVERY	87.84	95.03	85.22	91.70	84.95	90.44
OVERALL STD DEV (S)	101.97	113.86	242.59	25.44	183.24	143.15
OVERALL REL STD DEV, %	24.19	29.95	59.31	6.94	44.94	39.57
SINGLE STD DEV, (SR)	37.05		150.85		37.90	
ANALYST REL DEV, %	9.24		38.89		9.85	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 81. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR P-CHLOROANILINE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	7	8	9	9	8	8
TRUE CONC (C) UG/L	24.00	20.00	24.00	20.00	24.00	20.00
MEAN RECOVERY (X)	17.54	15.39	17.16	14.50	19.26	15.76
% RECOVERY	73.10	76.94	71.49	72.52	80.26	78.81
OVERALL STD DEV (S)	2.16	2.53	6.51	4.93	1.76	2.58
OVERALL REL STD DEV, %	12.29	16.42	37.95	33.27	9.16	16.39
SINGLE STD DEV, (SR)	2.22		1.74		1.33	
ANALYST REL DEV, %	13.47		11.02		7.40	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	9	9	9	9	8	8
TRUE CONC (C) UG/L	160.00	120.00	160.00	120.00	160.00	120.00
MEAN RECOVERY (X)	136.56	104.60	127.91	99.08	142.63	103.92
% RECOVERY	85.35	87.17	79.94	82.56	89.14	86.60
OVERALL STD DEV (S)	13.95	13.31	19.50	16.73	12.68	13.52
OVERALL REL STD DEV, %	10.21	12.72	15.24	16.88	8.89	13.01
SINGLE STD DEV, (SR)	8.66		6.68		9.34	
ANALYST REL DEV, %	7.18		5.89		7.58	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	9	9	9	8	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	366.67	313.78	360.33	299.63	399.25	338.50
% RECOVERY	76.39	78.44	75.07	74.91	83.18	84.62
OVERALL STD DEV (S)	58.99	51.31	61.80	25.13	62.10	44.50
OVERALL REL STD DEV, %	16.09	16.51	17.15	8.39	15.55	13.15
SINGLE STD DEV, (SR)	16.82		32.71		21.76	
ANALYST REL DEV, %	4.94		9.91		5.90	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 82. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 2-NITROANILINE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	9	9	9	9	7	7
TRUE CONC (C) UG/L	24.00	20.00	24.00	20.00	24.00	20.00
MEAN RECOVERY (X)	10.11	6.97	11.80	8.65	10.99	7.25
% RECOVERY	42.13	34.86	49.17	43.24	45.77	36.27
OVERALL STD DEV (S)	1.46	1.67	1.79	0.70	1.13	0.79
OVERALL REL STD DEV, %	14.47	23.94	15.18	8.15	10.29	10.86
SINGLE STD DEV, (SR)	0.41		1.05		0.52	
ANALYST REL DEV, %	4.80		10.23		5.71	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	9	9	9	9	7	7
TRUE CONC (C) UG/L	160.00	120.00	160.00	120.00	160.00	120.00
MEAN RECOVERY (X)	99.10	81.62	95.84	80.93	107.20	81.71
% RECOVERY	61.94	68.02	59.90	67.44	67.00	68.10
OVERALL STD DEV (S)	11.08	11.34	8.78	7.33	9.55	9.03
OVERALL REL STD DEV, %	11.18	13.89	9.16	9.06	8.91	11.05
SINGLE STD DEV, (SR)	8.20		3.37		7.27	
ANALYST REL DEV, %	9.08		3.81		7.70	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	9	9	9	9	7	7
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	353.00	303.89	363.89	281.22	409.43	329.14
% RECOVERY	73.54	75.97	75.81	70.31	85.30	82.29
OVERALL STD DEV (S)	78.33	77.32	82.58	73.38	61.14	58.68
OVERALL REL STD DEV, %	22.19	25.44	22.69	26.09	14.93	17.83
SINGLE STD DEV, (SR)	25.05		41.70		21.72	
ANALYST REL DEV, %	7.63		12.93		5.88	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 83. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR N-NITROSODI-N-BUTYLAMINE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	9	9	9	9	9	9
TRUE CONC (C) UG/L	13.60	9.60	13.60	9.60	13.60	9.60
MEAN RECOVERY (X)	17.37	13.76	18.23	15.77	16.92	14.17
% RECOVERY	127.70	143.31	134.07	164.24	124.43	147.57
OVERALL STD DEV (S)	4.63	2.99	3.07	2.65	2.61	2.68
OVERALL REL STD DEV, %	26.64	21.72	16.84	16.81	15.41	16.88
SINGLE STD DEV, (SR)	2.67		1.13		1.39	
ANALYST REL DEV, %	17.19		6.66		8.85	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	9	9	9	9	9	9
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	147.00	111.07	134.44	102.43	147.20	104.31
% RECOVERY	122.50	115.69	112.04	106.70	122.67	108.66
OVERALL STD DEV (S)	23.69	17.75	20.42	13.03	31.11	14.54
OVERALL REL STD DEV, %	16.11	15.98	15.18	12.72	21.14	13.94
SINGLE STD DEV, (SR)	12.01		9.30		13.78	
ANALYST REL DEV, %	9.31		7.85		10.96	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	9	9	9	9	9	9
TRUE CONC (C) UG/L	490.00	400.00	480.00	400.00	480.00	490.00
MEAN RECOVERY (X)	395.67	345.89	449.33	329.33	419.11	344.78
% RECOVERY	82.43	86.47	93.61	82.33	87.31	91.19
OVERALL STD DEV (S)	91.02	89.20	99.84	90.59	81.61	61.74
OVERALL REL STD DEV, %	23.00	25.79	22.22	27.51	19.47	16.93
SINGLE STD DEV, (SR)	26.95		54.41		24.24	
ANALYST REL DEV, %	7.27		13.98		6.19	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 84. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 3-NITROANILINE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	10	10	8	8	8	8
TRUE CONC (C) UG/L	24.00	20.00	24.00	20.00	24.00	20.00
MEAN RECOVERY (X)	15.95	13.47	14.71	12.10	17.01	13.85
% RECOVERY	66.45	67.37	61.30	60.51	70.89	69.24
OVERALL STD DEV (S)	5.55	5.27	4.98	3.77	3.29	4.33
OVERALL REL STD DEV, %	34.90	39.07	33.96	31.19	19.34	31.29
SINGLE STD DEV, (SR)	3.41		1.90		2.19	
ANALYST REL DEV, %	23.21		14.16		14.16	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	10	10	8	8	8	8
TRUE CONC (C) UG/L	160.00	120.00	160.00	120.00	160.00	120.00
MEAN RECOVERY (X)	144.60	109.87	133.99	100.60	149.19	104.12
% RECOVERY	90.37	91.56	83.74	83.83	93.24	86.77
OVERALL STD DEV (S)	32.52	21.86	29.60	18.61	39.08	26.50
OVERALL REL STD DEV, %	22.49	19.90	22.09	18.50	26.20	25.45
SINGLE STD DEV, (SR)	13.52		11.79		11.57	
ANALYST REL DEV, %	10.63		10.04		9.13	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	10	10	7	8	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	419.10	358.70	409.00	333.25	448.38	376.88
% RECOVERY	87.31	89.67	85.21	83.31	93.41	94.22
OVERALL STD DEV (S)	128.40	115.46	35.36	105.76	116.98	88.01
OVERALL REL STD DEV, %	30.64	32.19	8.64	31.74	26.09	23.35
SINGLE STD DEV, (SR)	28.73		54.34		36.11	
ANALYST REL DEV, %	7.30		14.64		8.75	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 85. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 2-NAPHTHYLAMINE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	9	9	9	9	9	9
TRUE CONC (C) UG/L	13.60	9.60	13.60	9.60	13.60	9.60
MEAN RECOVERY (X)	9.20	5.90	4.73	3.12	8.33	5.73
% RECOVERY	67.63	61.41	34.80	32.49	61.23	59.72
OVERALL STD DEV (S)	3.14	2.21	3.15	2.93	3.31	2.96
OVERALL REL STD DEV, %	34.10	37.54	66.64	93.98	39.72	51.69
SINGLE STD DEV, (SR)	2.36		1.32		1.27	
ANALYST REL DEV, %	31.32		33.60		18.09	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	10	10	9	9	9	9
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	109.55	85.67	86.60	64.33	112.23	84.04
% RECOVERY	91.29	89.24	72.17	67.01	93.53	87.55
OVERALL STD DEV (S)	30.98	17.28	14.30	15.01	20.17	16.43
OVERALL REL STD DEV, %	28.28	20.17	16.51	23.32	17.97	19.55
SINGLE STD DEV, (SR)	15.99		11.88		5.42	
ANALYST REL DEV, %	16.38		15.74		5.53	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	10	10	9	9	9	9
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	410.20	339.30	402.33	308.78	429.44	351.44
% RECOVERY	85.46	84.82	83.82	77.19	89.47	87.86
OVERALL STD DEV (S)	141.80	113.69	122.13	105.57	120.07	77.35
OVERALL REL STD DEV, %	34.57	33.51	30.36	33.54	27.96	22.01
SINGLE STD DEV, (SR)	38.40		50.80		49.82	
ANALYST REL DEV, %	10.25		14.29		12.76	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 86. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 5-NITRO-O-TOLUIDINE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	9	9	8	8	10	10
TRUE CONC (C) UG/L	13.60	9.60	13.60	9.60	13.60	9.60
MEAN RECOVERY (X)	9.60	6.48	9.09	6.84	10.35	7.00
% RECOVERY	70.57	67.47	66.81	71.22	76.14	72.87
OVERALL STD DEV (S)	2.51	2.53	2.10	2.64	3.05	2.36
OVERALL REL STD DEV, %	26.13	39.02	23.06	38.55	29.48	33.72
SINGLE STD DEV, (SR)	2.09		1.35		1.39	
ANALYST REL DEV, %	26.03		16.94		16.04	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	8	8	8	8	10	10
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	100.51	80.67	95.37	76.57	117.00	89.84
% RECOVERY	83.76	84.04	79.48	79.77	97.50	93.58
OVERALL STD DEV (S)	12.35	13.29	14.06	8.51	34.82	28.83
OVERALL REL STD DEV, %	12.29	16.47	14.74	11.11	29.76	32.09
SINGLE STD DEV, (SR)	10.09		7.68		8.40	
ANALYST REL DEV, %	11.14		8.93		8.12	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	9	9	7	8	10	10
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	408.89	337.11	410.29	314.00	447.20	377.90
% RECOVERY	85.19	84.28	85.48	78.50	93.17	94.47
OVERALL STD DEV (S)	147.68	125.73	56.75	89.92	150.71	118.53
OVERALL REL STD DEV, %	36.12	37.30	13.83	28.64	33.70	31.36
SINGLE STD DEV, (SR)	32.99		67.81		42.22	
ANALYST REL DEV, %	8.84		19.73		10.23	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 87. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR P-NITROANILINE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	10	10	8	8	10	10
TRUE CONC (C) UG/L	64.00	48.00	64.00	48.00	64.00	48.00
MEAN RECOVERY (X)	52.75	36.91	42.84	33.69	49.11	33.46
% RECOVERY	82.42	76.90	66.93	70.18	76.73	69.71
OVERALL STD DEV (S)	15.59	11.05	11.57	11.26	12.76	8.78
OVERALL REL STD DEV, %	29.55	29.94	27.02	33.44	25.98	26.26
SINGLE STD DEV, (SR)	11.29		5.63		8.10	
ANALYST REL DEV, %	25.15		14.71		19.61	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	10	10	8	8	9	9
TRUE CONC (C) UG/L	200.00	160.00	200.00	160.00	200.00	160.00
MEAN RECOVERY (X)	199.00	153.18	147.00	114.57	163.28	124.88
% RECOVERY	99.50	95.74	73.50	71.61	81.64	78.05
OVERALL STD DEV (S)	72.40	53.32	31.49	19.34	29.99	25.98
OVERALL REL STD DEV, %	36.38	34.81	21.42	16.88	18.37	20.80
SINGLE STD DEV, (SR)	19.45		14.90		12.48	
ANALYST REL DEV, %	11.04		11.39		8.66	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	10	10	8	8	10	10
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	405.80	343.80	412.00	316.25	423.70	344.10
% RECOVERY	84.54	85.95	85.83	79.06	88.27	86.02
OVERALL STD DEV (S)	201.17	170.45	71.58	91.12	187.11	175.49
OVERALL REL STD DEV, %	49.57	49.58	17.37	28.81	44.16	51.00
SINGLE STD DEV, (SR)	37.59		55.54		61.61	
ANALYST REL DEV, %	10.03		15.25		16.05	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 88. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 1,2-DIPHENYLHYDRAZINE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	9	9	9	9	8	8
TRUE CONC (C) UG/L	13.60	9.60	13.60	9.60	13.60	9.60
MEAN RECOVERY (X)	12.36	8.69	11.47	8.14	12.21	9.08
% RECOVERY	90.92	90.45	84.34	84.81	89.75	94.64
OVERALL STD DEV (S)	2.28	1.57	1.51	1.09	1.81	1.58
OVERALL REL STD DEV, %	18.46	18.03	13.13	13.38	14.83	17.34
SINGLE STD DEV, (SR)	1.16		0.71		0.77	
ANALYST REL DEV, %	11.06		7.21		7.20	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	9	9	9	9	8	8
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	101.74	85.00	93.53	78.09	102.06	80.92
% RECOVERY	84.79	88.54	77.94	81.34	85.05	84.30
OVERALL STD DEV (S)	16.40	15.06	10.52	8.01	15.04	6.97
OVERALL REL STD DEV, %	16.12	17.72	11.25	10.26	14.73	8.61
SINGLE STD DEV, (SR)	5.18		5.37		7.47	
ANALYST REL DEV, %	5.54		6.26		8.16	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	9	9	10	10	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	327.11	277.22	347.22	275.30	321.25	299.38
% RECOVERY	68.15	69.31	72.34	68.82	66.93	74.84
OVERALL STD DEV (S)	110.88	98.18	151.58	96.24	103.03	86.17
OVERALL REL STD DEV, %	33.90	35.42	43.66	31.33	32.07	28.78
SINGLE STD DEV, (SR)	18.66		77.09		15.96	
ANALYST REL DEV, %	6.17		24.77		5.14	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 89. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 4-AMINOBIPHENYL ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	10	9	9	9	8	7
TRUE CONC (C) UG/L	13.60	9.60	13.60	9.60	13.60	9.60
MEAN RECOVERY (X)	10.76	6.20	6.51	3.70	11.80	6.72
% RECOVERY	79.10	64.56	47.88	38.58	86.76	70.01
OVERALL STD DEV (S)	4.74	2.30	3.19	2.05	4.95	1.99
OVERALL REL STD DEV, %	44.04	37.09	49.95	55.44	41.93	29.66
SINGLE STD DEV, (SR)	1.78		1.17		1.21	
ANALYST REL DEV, %	21.01		22.84		13.03	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	10	10	10	10	8	8
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	106.12	87.97	98.04	75.75	114.61	89.42
% RECOVERY	88.43	91.64	81.70	78.91	95.51	93.15
OVERALL STD DEV (S)	17.47	13.11	18.03	17.03	11.70	9.08
OVERALL REL STD DEV, %	16.46	14.90	18.39	22.48	10.21	10.15
SINGLE STD DEV, (SR)	11.20		7.89		10.01	
ANALYST REL DEV, %	11.54		9.08		9.81	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	10	10	10	10	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	368.60	308.50	390.40	307.70	400.75	325.88
% RECOVERY	76.79	77.12	81.33	76.92	83.49	81.47
OVERALL STD DEV (S)	125.32	104.15	98.51	82.12	91.68	65.41
OVERALL REL STD DEV, %	34.00	33.76	25.23	26.69	22.88	20.07
SINGLE STD DEV, (SR)	23.44		49.04		25.69	
ANALYST REL DEV, %	6.92		14.05		7.07	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 90. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR METHAPYRILENE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	7	7	6	6	8	7
TRUE CONC (C) UG/L	13.60	9.60	13.60	9.60	13.60	9.60
MEAN RECOVERY (X)	7.93	3.89	10.53	6.46	5.44	3.64
% RECOVERY	58.31	40.40	77.41	67.31	40.03	37.89
OVERALL STD DEV (S)	4.16	2.26	1.82	1.44	4.26	2.69
OVERALL REL STD DEV, %	52.43	58.19	17.25	22.30	79.27	73.91
SINGLE STD DEV, (SR)	1.98		0.92		1.41	
ANALYST REL DEV, %	33.47		10.79		30.99	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	8	8	5	5	8	8
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	126.52	93.04	99.16	83.92	102.07	60.54
% RECOVERY	105.44	96.91	82.63	87.42	85.06	63.06
OVERALL STD DEV (S)	45.57	26.74	11.75	6.43	21.79	28.49
OVERALL REL STD DEV, %	36.02	28.74	11.85	7.67	21.35	47.05
SINGLE STD DEV, (SR)	16.06		4.79		21.80	
ANALYST REL DEV, %	14.03		5.24		26.82	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	8	8	6	6	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	453.75	367.38	385.33	348.00	418.25	301.13
% RECOVERY	94.53	91.84	80.28	87.00	87.14	75.28
OVERALL STD DEV (S)	141.80	106.62	116.53	107.20	118.34	75.08
OVERALL REL STD DEV, %	31.25	29.02	30.24	30.81	28.29	24.93
SINGLE STD DEV, (SR)	31.89		71.44		72.60	
ANALYST REL DEV, %	7.77		19.49		20.19	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 91. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR BENZIDINE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	9	7	6	5	8	8
TRUE CONC (C) UG/L	64.00	48.00	64.00	48.00	64.00	48.00
MEAN RECOVERY (X)	42.78	22.37	9.56	2.44	49.69	15.20
% RECOVERY	66.84	46.60	14.95	5.09	77.64	31.66
OVERALL STD DEV (S)	13.16	8.97	10.48	1.27	35.06	14.15
OVERALL REL STD DEV, %	30.76	40.12	109.56	52.09	70.55	93.12
SINGLE STD DEV, (SR)	4.12		3.59		9.74	
ANALYST REL DEV, %	12.64		59.81		30.01	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	9	8	7	6	9	9
TRUE CONC (C) UG/L	200.00	160.00	200.00	160.00	200.00	160.00
MEAN RECOVERY (X)	234.00	141.95	92.21	73.61	206.99	118.51
% RECOVERY	117.00	88.72	46.11	46.01	103.49	74.07
OVERALL STD DEV (S)	102.63	46.56	60.07	53.72	116.61	79.25
OVERALL REL STD DEV, %	43.86	32.80	65.14	72.98	56.34	66.87
SINGLE STD DEV, (SR)	41.10		16.71		45.40	
ANALYST REL DEV, %	21.87		20.16		27.89	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	8	9	7	6	9	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	436.78	369.92	253.51	225.20	491.33	325.63
% RECOVERY	91.00	92.48	52.82	56.30	102.36	81.41
OVERALL STD DEV (S)	166.55	195.34	176.02	124.02	221.09	98.53
OVERALL REL STD DEV, %	38.13	53.08	69.43	55.07	45.00	30.26
SINGLE STD DEV, (SR)	58.49		116.37		142.79	
ANALYST REL DEV, %	14.50		48.62		34.96	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 92. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR P-DIMETHYLAMINOAZOBENZENE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	9	9	9	9	8	8
TRUE CONC (C) UG/L	13.50	9.60	13.60	9.60	13.60	9.60
MEAN RECOVERY (X)	9.54	6.59	10.13	6.93	10.12	6.79
% RECOVERY	70.15	68.61	74.49	72.22	74.44	70.77
OVERALL STD DEV (S)	1.94	1.31	2.07	1.90	2.34	2.13
OVERALL REL STD DEV, %	19.28	19.83	20.40	27.39	23.08	32.09
SINGLE STD DEV, (SR)	1.08		0.56		0.66	
ANALYST REL DEV, %	13.36		6.58		7.81	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	9	9	9	9	8	8
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	104.72	85.61	99.12	79.92	105.91	81.24
% RECOVERY	87.27	89.18	82.60	83.25	88.26	84.62
OVERALL STD DEV (S)	18.83	18.60	15.25	9.25	13.70	13.15
OVERALL REL STD DEV, %	17.99	21.73	15.39	11.58	12.93	16.19
SINGLE STD DEV, (SR)	6.07		7.20		3.32	
ANALYST REL DEV, %	6.38		8.04		3.55	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	9	9	9	9	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	389.99	328.11	422.89	300.56	414.25	321.39
% RECOVERY	81.23	82.03	88.10	75.14	86.30	80.34
OVERALL STD DEV (S)	93.88	79.13	69.44	31.07	70.80	61.09
OVERALL REL STD DEV, %	24.08	24.12	16.42	10.34	17.09	19.01
SINGLE STD DEV, (SR)	24.50		54.52		30.23	
ANALYST REL DEV, %	6.82		15.07		8.23	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 93. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 3,3 -DIMETHYLBENZIDINE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	8	8	9	9	8	8
TRUE CONC (C) UG/L	64.00	48.00	64.00	48.00	64.00	48.00
MEAN RECOVERY (X)	44.84	28.56	19.15	10.82	43.15	28.70
% RECOVERY	70.06	59.51	29.93	22.53	67.42	59.79
OVERALL STD DEV (S)	13.08	8.16	11.58	8.82	10.88	10.90
OVERALL REL STD DEV, %	29.17	28.56	60.45	81.53	25.20	37.98
SINGLE STD DEV, (SR)	7.78		4.78		11.12	
ANALYST REL DEV, %	21.19		31.92		30.94	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	8	8	8	9	8	8
TRUE CONC (C) UG/L	200.00	160.00	200.00	160.00	200.00	160.00
MEAN RECOVERY (X)	179.38	142.95	123.34	94.79	176.38	125.41
% RECOVERY	89.69	89.34	61.67	59.24	88.19	78.38
OVERALL STD DEV (S)	23.14	32.43	40.59	49.53	42.01	28.00
OVERALL REL STD DEV, %	12.90	22.69	32.91	52.25	23.82	22.33
SINGLE STD DEV, (SR)	16.49		17.03		15.24	
ANALYST REL DEV, %	10.23		15.62		10.10	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	7	7	8	9	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	451.57	362.00	362.13	295.13	457.88	366.25
% RECOVERY	94.08	90.50	75.44	73.78	95.39	91.56
OVERALL STD DEV (S)	131.47	75.05	80.75	96.21	91.64	60.29
OVERALL REL STD DEV, %	29.11	20.73	22.30	32.60	20.02	16.46
SINGLE STD DEV, (SR)	63.48		59.21		54.37	
ANALYST REL DEV, %	15.61		18.02		13.19	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 94. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 4,4 -METHYLENE BIS (2-CHLOROAN ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	8	7	8	8	8	7
TRUE CONC (C) UG/L	64.00	48.00	64.00	48.00	64.00	48.00
MEAN RECOVERY (X)	53.04	35.26	38.10	25.61	54.95	35.47
% RECOVERY	82.87	73.45	59.53	53.36	85.86	73.90
OVERALL STD DEV (S)	8.42	2.85	9.03	6.90	7.49	4.49
OVERALL REL STD DEV, %	15.87	8.07	23.70	26.93	13.63	12.66
SINGLE STD DEV, (SR)	5.70		6.25		4.78	
ANALYST REL DEV, %	12.90		19.63		10.57	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	8	8	8	8	8	8
TRUE CONC (C) UG/L	200.00	160.00	200.00	160.00	200.00	160.00
MEAN RECOVERY (X)	191.50	155.75	159.75	120.71	182.63	140.89
% RECOVERY	95.75	97.34	79.87	75.45	91.31	88.05
OVERALL STD DEV (S)	38.07	27.65	20.40	17.41	33.85	22.15
OVERALL REL STD DEV, %	19.88	17.75	12.77	14.42	18.53	15.72
SINGLE STD DEV, (SR)	9.14		13.36		15.86	
ANALYST REL DEV, %	5.26		9.53		9.80	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	7	8	8	8	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	454.57	396.00	431.63	315.25	435.25	356.13
% RECOVERY	94.70	99.00	89.92	78.81	90.68	89.53
OVERALL STD DEV (S)	82.24	73.49	69.97	91.38	55.25	39.13
OVERALL REL STD DEV, %	18.09	18.56	15.98	28.99	12.69	10.93
SINGLE STD DEV, (SR)	39.82		43.22		37.81	
ANALYST REL DEV, %	9.36		11.57		9.53	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 95. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 3,3 -DIMETHOXYBENZIDINE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	8	6	8	8	9	9
TRUE CONC (C) UG/L	64.00	48.00	64.00	48.00	64.00	48.00
MEAN RECOVERY (X)	28.08	15.41	17.37	10.36	35.64	22.83
% RECOVERY	43.88	32.10	27.13	21.59	55.69	47.55
OVERALL STD DEV (S)	14.59	8.14	9.35	6.89	13.84	13.00
OVERALL REL STD DEV, %	51.94	52.81	53.82	66.46	38.92	56.96
SINGLE STD DEV, (SR)	5.55		5.61		7.16	
ANALYST REL DEV, %	25.54		40.47		24.49	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	8	8	8	8	8	9
TRUE CONC (C) UG/L	200.00	160.00	200.00	160.00	200.00	160.00
MEAN RECOVERY (X)	151.47	119.67	119.24	74.04	153.63	117.56
% RECOVERY	75.74	74.80	59.62	46.27	76.81	73.47
OVERALL STD DEV (S)	44.27	39.37	44.29	43.84	40.81	46.90
OVERALL REL STD DEV, %	29.22	32.90	37.15	59.22	26.56	39.90
SINGLE STD DEV, (SR)	14.45		16.83		12.52	
ANALYST REL DEV, %	10.66		17.42		9.23	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	6	8	7	8	8	9
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	383.17	353.88	363.71	341.25	473.38	374.78
% RECOVERY	79.83	88.47	75.77	85.31	98.62	93.69
OVERALL STD DEV (S)	28.20	70.33	57.61	128.87	73.95	98.39
OVERALL REL STD DEV, %	7.36	19.87	15.84	37.76	15.60	23.58
SINGLE STD DEV, (SR)	38.38		68.08		45.37	
ANALYST REL DEV, %	10.41		19.31		10.70	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 96. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 2-METHYLNAPHTHALENE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	10	10	8	8	10	10
TRUE CONC (C) UG/L	13.60	9.60	13.60	9.60	13.60	9.60
MEAN RECOVERY (X)	13.13	8.77	13.09	9.38	12.37	8.89
% RECOVERY	96.54	91.35	96.23	97.73	90.93	92.66
OVERALL STD DEV (S)	2.18	1.37	1.87	1.35	1.62	1.32
OVERALL REL STD DEV, %	16.61	15.58	14.33	14.36	13.12	14.89
SINGLE STD DEV, (SR)	1.19		0.64		0.63	
ANALYST REL DEV, %	10.83		5.69		5.89	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	10	10	8	8	10	10
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	104.27	90.39	100.36	89.89	106.62	83.40
% RECOVERY	86.89	94.16	83.64	93.63	88.85	86.87
OVERALL STD DEV (S)	4.57	7.21	11.35	10.38	15.17	11.80
OVERALL REL STD DEV, %	4.38	7.98	11.31	11.55	14.22	14.15
SINGLE STD DEV, (SR)	6.26		6.51		10.11	
ANALYST REL DEV, %	6.43		6.85		10.64	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	10	10	8	7	10	10
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	339.50	283.00	362.13	298.43	361.50	293.90
% RECOVERY	70.73	70.75	75.44	74.61	75.31	73.47
OVERALL STD DEV (S)	84.30	63.11	93.04	35.21	78.69	62.46
OVERALL REL STD DEV, %	24.98	22.30	25.69	11.80	21.77	21.25
SINGLE STD DEV, (SR)	21.36		42.07		27.31	
ANALYST REL DEV, %	6.86		12.74		8.33	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 97. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR METHYL METHANE SULFONATE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	7	8	8	8	8	8
TRUE CONC (C) UG/L	13.60	9.60	13.60	9.60	13.60	9.60
MEAN RECOVERY (X)	9.32	4.77	8.74	4.61	8.97	5.03
% RECOVERY	68.53	49.70	64.26	47.98	65.94	52.45
OVERALL STD DEV (S)	1.27	1.15	1.60	1.66	1.00	0.91
OVERALL REL STD DEV, %	13.60	24.14	18.32	36.06	11.17	18.03
SINGLE STD DEV, (SR)	0.46		1.92		0.82	
ANALYST REL DEV, %	6.50		28.71		11.79	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	7	8	8	8	8	7
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	83.74	63.91	72.26	60.60	81.46	65.04
% RECOVERY	69.79	66.58	60.22	63.12	67.99	67.75
OVERALL STD DEV (S)	2.86	4.49	11.93	13.39	10.93	2.74
OVERALL REL STD DEV, %	3.42	7.03	16.51	22.10	13.41	4.21
SINGLE STD DEV, (SR)	2.04		7.82		5.10	
ANALYST REL DEV, %	2.76		11.78		6.96	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	8	8	8	8	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	277.00	236.88	284.75	228.50	321.38	263.38
% RECOVERY	57.71	59.22	59.32	57.12	66.95	65.84
OVERALL STD DEV (S)	39.77	32.14	57.41	39.35	77.07	47.24
OVERALL REL STD DEV, %	14.00	13.57	20.16	17.22	23.98	17.94
SINGLE STD DEV, (SR)	31.26		25.29		26.25	
ANALYST REL DEV, %	12.17		9.85		8.98	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 98. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR N-NITROSOMORPHOLINE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	8	8	8	7	8	8
TRUE CONC (C) UG/L	13.60	9.60	13.60	9.60	13.60	9.60
MEAN RECOVERY (X)	7.85	4.91	12.35	6.89	9.77	5.54
% RECOVERY	57.69	51.20	90.81	71.76	71.85	57.76
OVERALL STD DEV (S)	2.58	1.29	2.32	0.72	2.31	1.69
OVERALL REL STD DEV, %	32.92	26.30	18.78	10.52	23.54	30.45
SINGLE STD DEV, (SR)	1.25		1.39		1.03	
ANALYST REL DEV, %	19.58		14.41		13.45	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	7	8	8	8	8	8
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	75.73	64.29	91.92	78.12	87.22	67.06
% RECOVERY	63.11	66.97	76.60	81.38	72.69	69.86
OVERALL STD DEV (S)	3.99	7.84	13.79	17.62	10.05	10.66
OVERALL REL STD DEV, %	5.26	12.20	15.00	22.56	11.53	16.19
SINGLE STD DEV, (SR)	5.19		6.41		3.61	
ANALYST REL DEV, %	7.41		7.54		4.68	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	8	8	8	8	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	310.38	251.50	362.00	303.63	332.13	274.50
% RECOVERY	64.66	62.87	75.42	75.91	69.19	66.62
OVERALL STD DEV (S)	61.53	42.44	73.40	61.84	139.89	95.75
OVERALL REL STD DEV, %	19.82	16.88	20.28	20.37	42.12	34.88
SINGLE STD DEV, (SR)	17.13		36.83		35.71	
ANALYST REL DEV, %	6.10		11.07		11.77	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 99. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 4-METHYLPHENOL ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	8	8	8	9	8	9
TRUE CONC (C) UG/L	24.00	20.00	24.00	20.00	24.00	20.00
MEAN RECOVERY (X)	16.73	13.76	33.99	27.22	17.66	15.65
% RECOVERY	69.70	68.82	141.61	136.12	73.59	78.25
OVERALL STD DEV (S)	6.55	3.67	12.06	6.18	2.09	4.19
OVERALL REL STD DEV, %	39.17	26.69	35.49	22.70	11.84	26.78
SINGLE STD DEV, (SR)	3.21		5.10		1.96	
ANALYST REL DEV, %	21.06		16.66		11.79	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	8	8	9	9	9	9
TRUE CONC (C) UG/L	160.00	120.00	160.00	120.00	160.00	120.00
MEAN RECOVERY (X)	124.75	96.74	140.22	111.12	140.67	101.87
% RECOVERY	77.97	80.61	87.64	92.60	87.92	84.89
OVERALL STD DEV (S)	15.92	16.39	19.85	13.46	27.21	20.53
OVERALL REL STD DEV, %	12.76	16.94	14.16	12.11	19.34	20.15
SINGLE STD DEV, (SR)	7.66		7.40		9.80	
ANALYST REL DEV, %	6.91		5.89		8.08	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	8	8	9	8	9	9
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	368.75	297.63	375.67	308.38	384.67	317.11
% RECOVERY	76.82	74.41	78.26	77.09	80.14	79.28
OVERALL STD DEV (S)	65.04	34.43	86.93	37.45	115.34	83.74
OVERALL REL STD DEV, %	17.64	11.57	23.14	12.14	29.98	26.41
SINGLE STD DEV, (SR)	26.51		20.27		25.82	
ANALYST REL DEV, %	7.96		5.93		7.36	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 100. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 2,6-DICHLOROPHENOL ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	9	10	8	8	10	10
TRUE CONC (C) UG/L	24.00	20.00	24.00	20.00	24.00	20.00
MEAN RECOVERY (X)	21.80	17.61	24.35	18.47	21.00	16.59
% RECOVERY	90.83	88.05	101.46	92.37	87.50	82.95
OVERALL STD DEV (S)	3.20	4.05	2.97	2.51	3.07	2.80
OVERALL REL STD DEV, %	14.66	23.02	12.20	13.60	14.61	16.90
SINGLE STD DEV, (SR)	1.50		2.06		1.29	
ANALYST REL DEV, %	7.61		9.61		6.81	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	10	10	8	8	10	10
TRUE CONC (C) UG/L	160.00	120.00	160.00	120.00	160.00	120.00
MEAN RECOVERY (X)	145.60	110.58	137.50	106.10	145.40	108.64
% RECOVERY	91.00	92.15	85.94	88.42	90.87	90.53
OVERALL STD DEV (S)	15.32	15.70	18.08	16.77	16.49	12.08
OVERALL REL STD DEV, %	10.52	14.19	13.15	15.81	11.34	11.12
SINGLE STD DEV, (SR)	9.20		7.01		8.14	
ANALYST REL DEV, %	7.25		5.75		6.41	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	9	10	8	8	10	10
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	382.33	332.10	386.38	333.13	409.80	353.60
% RECOVERY	79.65	83.02	80.49	83.28	85.37	88.40
OVERALL STD DEV (S)	32.33	34.75	55.27	39.84	113.23	89.48
OVERALL REL STD DEV, %	8.46	10.46	14.30	11.96	27.63	25.30
SINGLE STD DEV, (SR)	11.95		22.45		24.47	
ANALYST REL DEV, %	3.35		6.24		6.41	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 101. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 1,2,4,5-TETRACHLOROBENZENE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	7	8	8	8	8	8
TRUE CONC (C) UG/L	13.60	9.60	13.60	9.60	13.60	9.60
MEAN RECOVERY (X)	12.21	7.46	11.08	6.84	12.07	7.23
% RECOVERY	89.81	77.67	81.44	71.30	88.73	75.35
OVERALL STD DEV (S)	1.23	0.92	2.08	1.32	3.10	1.96
OVERALL REL STD DEV, %	10.03	12.29	18.81	19.35	25.71	27.03
SINGLE STD DEV, (SR)	0.68		1.15		1.19	
ANALYST REL DEV, %	6.94		12.86		12.29	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	8	8	8	8	8	8
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	87.32	71.02	77.87	64.74	84.01	69.05
% RECOVERY	72.77	73.98	64.90	67.43	70.01	71.93
OVERALL STD DEV (S)	17.42	9.15	3.82	5.62	12.65	10.73
OVERALL REL STD DEV, %	19.95	12.88	4.91	8.68	15.06	15.53
SINGLE STD DEV, (SR)	7.75		4.71		7.32	
ANALYST REL DEV, %	9.79		6.61		9.57	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	9	7	8	8	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	310.13	269.29	287.25	267.63	311.88	272.88
% RECOVERY	64.61	67.32	59.84	66.91	64.97	68.22
OVERALL STD DEV (S)	68.35	21.06	67.62	39.30	68.06	59.86
OVERALL REL STD DEV, %	22.04	7.82	23.54	14.68	21.82	21.94
SINGLE STD DEV, (SR)	26.69		35.75		17.77	
ANALYST REL DEV, %	9.21		12.89		6.08	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 102. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR ISOSAFROLE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	8	9	8	8	8	8
TRUE CONC (C) UG/L	13.60	9.60	13.60	9.60	13.60	9.60
MEAN RECOVERY (X)	12.39	7.38	12.24	7.55	11.72	6.84
% RECOVERY	91.08	76.90	89.98	78.68	86.20	71.21
OVERALL STD DEV (S)	1.97	1.79	2.04	1.96	1.48	1.40
OVERALL REL STD DEV, %	15.89	24.08	16.67	25.99	12.62	20.44
SINGLE STD DEV, (SR)	0.52		0.75		1.20	
ANALYST REL DEV, %	5.23		7.62		12.90	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	9	9	8	8	8	8
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	95.32	80.57	94.92	77.42	103.94	82.99
% RECOVERY	79.44	83.92	79.10	80.65	86.61	86.45
OVERALL STD DEV (S)	18.05	10.97	11.07	7.75	20.11	10.74
OVERALL REL STD DEV, %	18.94	13.62	11.66	10.01	19.35	12.94
SINGLE STD DEV, (SR)	8.75		5.44		8.00	
ANALYST REL DEV, %	9.95		6.31		8.55	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	9	9	8	8	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	376.78	337.22	373.88	333.00	407.50	338.63
% RECOVERY	78.50	84.31	77.89	83.25	84.90	84.66
OVERALL STD DEV (S)	66.95	37.42	33.69	36.10	76.00	70.65
OVERALL REL STD DEV, %	17.77	11.10	9.01	10.84	18.65	20.86
SINGLE STD DEV, (SR)	31.47		27.77		20.15	
ANALYST REL DEV, %	8.82		7.86		5.40	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 103. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR DIBENZOFURAN ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	9	10	9	9	8	9
TRUE CONC (C) UG/L	13.60	9.60	13.60	9.60	13.60	9.60
MEAN RECOVERY (X)	14.92	9.04	13.49	8.52	13.37	8.76
% RECOVERY	109.72	94.20	99.18	88.70	98.35	91.28
OVERALL STD DEV (S)	1.88	1.25	1.74	1.04	0.93	1.84
OVERALL REL STD DEV, %	12.59	13.78	12.92	12.27	6.99	21.02
SINGLE STD DEV, (SR)	0.64		0.69		0.83	
ANALYST REL DEV, %	5.32		6.27		7.52	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	9	9	8	9	9	9
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	105.98	89.92	95.60	80.72	104.34	85.27
% RECOVERY	88.31	93.67	79.67	84.09	86.95	88.82
OVERALL STD DEV (S)	9.82	5.38	5.51	6.05	12.45	5.72
OVERALL REL STD DEV, %	9.26	5.99	5.76	7.50	11.93	6.71
SINGLE STD DEV, (SR)	6.35		2.13		7.04	
ANALYST REL DEV, %	6.48		2.41		7.42	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	10	10	9	9	9	9
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	349.20	308.00	313.56	274.11	357.56	308.44
% RECOVERY	72.75	77.00	65.32	68.53	74.49	77.11
OVERALL STD DEV (S)	83.18	52.06	49.92	41.99	108.96	104.22
OVERALL REL STD DEV, %	23.82	16.90	15.92	15.32	30.47	33.79
SINGLE STD DEV, (SR)	36.40		13.38		19.96	
ANALYST REL DEV, %	11.08		4.56		5.99	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 104. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR N-NITROSODIPHENYLAMINE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	9	10	8	8	9	9
TRUE CONC (C) UG/L	13.60	9.60	13.60	9.60	13.60	9.60
MEAN RECOVERY (X)	15.70	9.29	16.24	10.16	14.07	8.57
% RECOVERY	115.44	96.79	119.39	105.79	103.45	89.28
OVERALL STD DEV (S)	1.68	1.06	2.68	1.61	1.76	1.27
OVERALL REL STD DEV, %	10.70	11.44	16.49	15.86	12.51	14.80
SINGLE STD DEV, (SR)	0.95		1.26		1.17	
ANALYST REL DEV, %	7.61		9.52		10.38	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	10	10	8	8	9	9
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	112.56	97.91	121.60	95.77	122.89	95.00
% RECOVERY	93.80	101.99	101.33	99.77	102.41	98.95
OVERALL STD DEV (S)	24.86	11.14	20.21	15.04	20.96	12.36
OVERALL REL STD DEV, %	22.08	11.38	16.62	15.71	17.04	13.01
SINGLE STD DEV, (SR)	13.45		7.23		7.71	
ANALYST REL DEV, %	12.78		6.65		7.08	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	10	10	8	8	9	9
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	394.20	347.00	421.63	349.38	439.78	353.67
% RECOVERY	82.12	86.75	87.84	87.34	91.62	88.42
OVERALL STD DEV (S)	105.62	46.60	72.52	57.99	100.79	93.50
OVERALL REL STD DEV, %	26.79	13.43	17.20	16.60	22.92	26.44
SINGLE STD DEV, (SR)	53.43		33.22		19.43	
ANALYST REL DEV, %	14.42		8.62		4.90	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 105. STUDY 30, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR PHENACETIN ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	9	9	7	8	7	8
TRUE CONC (C) UG/L	64.00	48.00	64.00	48.00	64.00	48.00
MEAN RECOVERY (X)	48.86	38.04	51.91	35.10	56.20	41.97
% RECOVERY	76.34	79.26	81.12	73.12	87.81	87.45
OVERALL STD DEV (S)	8.21	7.67	8.96	11.25	5.49	13.92
OVERALL REL STD DEV, %	16.81	20.16	17.07	32.04	9.76	33.17
SINGLE STD DEV, (SR)	8.72		3.10		5.17	
ANALYST REL DEV, %	20.07		7.13		10.53	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	9	8	8	8	8	8
TRUE CONC (C) UG/L	200.00	160.00	200.00	160.00	200.00	160.00
MEAN RECOVERY (X)	174.44	141.50	152.25	124.52	215.00	164.88
% RECOVERY	87.22	88.44	76.12	77.83	107.50	103.05
OVERALL STD DEV (S)	36.71	12.00	34.10	21.80	57.21	35.03
OVERALL REL STD DEV, %	21.05	8.48	22.40	17.50	26.61	21.25
SINGLE STD DEV, (SR)	18.39		13.93		18.27	
ANALYST REL DEV, %	11.64		10.07		9.62	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	9	9	8	8	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	442.33	363.56	362.25	303.75	475.88	397.13
% RECOVERY	92.15	90.89	75.47	75.94	99.14	99.28
OVERALL STD DEV (S)	128.29	75.22	62.61	57.17	117.21	96.82
OVERALL REL STD DEV, %	29.00	20.69	17.28	16.82	24.63	24.38
SINGLE STD DEV, (SR)	49.04		18.08		24.13	
ANALYST REL DEV, %	12.17		5.43		5.53	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

TABLE 106. STATISTICAL SUMMARY FOR PRONAMIDE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	10	10	7	9	9	9
TRUE CONC (C) UG/L	24.00	20.00	24.00	20.00	24.00	20.00
MEAN RECOVERY (X)	22.28	18.70	22.23	19.99	24.20	19.56
% RECOVERY	92.83	93.50	92.62	99.94	100.83	97.80
OVERALL STD DEV (S)	4.41	3.89	3.02	3.88	5.53	6.40
OVERALL REL STD DEV, %	19.79	20.81	13.58	19.39	22.86	32.71
SINGLE STD DEV, (SR)	3.17		2.55		2.35	
ANALYST REL DEV, %	15.48		12.09		10.74	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	10	9	9	9	9	9
TRUE CONC (C) UG/L	160.00	120.00	160.00	120.00	160.00	120.00
MEAN RECOVERY (X)	164.70	130.44	152.22	115.59	174.00	128.67
% RECOVERY	102.94	108.70	95.14	96.32	108.75	107.22
OVERALL STD DEV (S)	31.03	10.68	27.93	21.42	30.36	22.34
OVERALL REL STD DEV, %	18.84	8.19	18.35	18.53	17.45	17.36
SINGLE STD DEV, (SR)	17.99		8.53		11.13	
ANALYST REL DEV, %	12.19		6.37		7.35	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	10	10	9	9	9	9
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	509.20	429.60	435.67	365.11	482.11	402.33
% RECOVERY	106.08	107.40	90.76	91.28	100.44	100.58
OVERALL STD DEV (S)	101.71	51.31	61.60	65.00	84.27	67.12
OVERALL REL STD DEV, %	19.97	11.94	14.14	17.80	17.48	16.68
SINGLE STD DEV, (SR)	45.14		29.53		35.70	
ANALYST REL DEV, %	9.62		7.38		8.07	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 107. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 2-ACETYLAMINOFLUORENE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	10	10	7	8	9	9
TRUE CONC (C) UG/L	64.00	48.00	64.00	48.00	64.00	48.00
MEAN RECOVERY (X)	46.30	35.20	61.21	40.46	52.74	38.07
% RECOVERY	72.34	73.33	95.65	84.30	82.41	79.31
OVERALL STD DEV (S)	12.86	8.19	7.58	10.30	12.19	12.59
OVERALL REL STD DEV, %	27.78	23.26	12.38	25.46	23.11	33.08
SINGLE STD DEV, (SR)	8.12		7.33		7.57	
ANALYST REL DEV, %	19.91		14.41		16.68	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	10	10	7	8	9	9
TRUE CONC (C) UG/L	200.00	160.00	200.00	160.00	200.00	160.00
MEAN RECOVERY (X)	180.10	157.20	193.14	175.00	209.44	172.78
% RECOVERY	90.05	98.25	96.57	109.38	104.72	107.99
OVERALL STD DEV (S)	40.69	27.47	42.16	50.41	40.05	35.06
OVERALL REL STD DEV, %	22.59	17.47	21.83	28.81	19.12	20.29
SINGLE STD DEV, (SR)	23.04		13.73		12.50	
ANALYST REL DEV, %	13.66		7.46		6.54	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	10	10	8	8	9	9
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	460.70	397.00	556.50	451.13	477.22	400.67
% RECOVERY	95.98	96.75	115.94	112.78	99.42	100.17
OVERALL STD DEV (S)	103.44	73.31	235.06	143.16	84.90	82.86
OVERALL REL STD DEV, %	22.45	18.94	42.24	32.18	17.79	20.68
SINGLE STD DEV, (SR)	46.78		69.93		44.28	
ANALYST REL DEV, %	11.04		13.88		10.09	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 108. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR TRIS(2,3-DIBROMOPROPYL) PHOSPH ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	6	5	6	6	7	5
TRUE CONC (C) UG/L	64.00	48.00	64.00	48.00	64.00	48.00
MEAN RECOVERY (X)	24.76	16.16	33.35	18.09	37.51	15.90
% RECOVERY	38.69	33.67	52.11	37.70	58.62	33.12
OVERALL STD DEV (S)	19.06	12.42	24.26	9.23	23.61	1.53
OVERALL REL STD DEV, %	76.98	76.87	72.74	51.02	62.92	9.61
SINGLE STD DEV, (SR)	5.27		11.69		5.16	
ANALYST REL DEV, %	25.75		45.43		19.32	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	7	7	6	7	7	8
TRUE CONC (C) UG/L	200.00	160.00	200.00	160.00	200.00	160.00
MEAN RECOVERY (X)	161.60	149.47	109.53	111.06	236.77	238.64
% RECOVERY	80.80	93.42	54.77	69.41	118.39	149.15
OVERALL STD DEV (S)	59.73	45.91	40.60	70.05	169.71	196.81
OVERALL REL STD DEV, %	36.96	30.72	37.06	63.08	71.68	82.47
SINGLE STD DEV, (SR)	34.76		5.71		21.72	
ANALYST REL DEV, %	22.35		5.18		9.14	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	8	8	7	7	7	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	476.00	364.00	360.43	278.57	562.43	674.75
% RECOVERY	99.17	91.00	75.09	69.64	117.17	168.69
OVERALL STD DEV (S)	177.11	134.41	146.05	153.57	241.84	535.99
OVERALL REL STD DEV, %	37.21	36.93	40.52	55.13	43.00	79.43
SINGLE STD DEV, (SR)	66.21		51.34		112.70	
ANALYST REL DEV, %	15.76		16.07		18.22	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 109. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR BENZYL ALCOHOL ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	9	9	7	7	8	9
TRUE CONC (C) UG/L	24.00	20.00	24.00	20.00	24.00	20.00
MEAN RECOVERY (X)	14.19	12.92	19.90	15.61	15.76	12.13
% RECOVERY	59.13	64.61	82.92	78.07	65.65	60.66
OVERALL STD DEV (S)	5.33	4.38	2.12	2.31	3.55	3.97
OVERALL REL STD DEV, %	37.53	33.90	10.64	14.78	22.51	32.76
SINGLE STD DEV, (SR)	3.40		1.99		1.30	
ANALYST REL DEV, %	25.08		11.19		9.29	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	9	9	7	7	8	8
TRUE CONC (C) UG/L	160.00	120.00	160.00	120.00	160.00	120.00
MEAN RECOVERY (X)	118.34	92.96	121.14	98.63	127.25	96.90
% RECOVERY	73.97	77.46	75.71	82.19	79.53	80.75
OVERALL STD DEV (S)	18.20	13.52	11.87	12.40	18.09	10.34
OVERALL REL STD DEV, %	15.38	14.54	9.80	12.57	14.22	10.67
SINGLE STD DEV, (SR)	10.17		5.62		7.59	
ANALYST REL DEV, %	9.62		5.11		6.77	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	8	8	7	7	9	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	331.63	276.38	337.00	289.86	376.89	299.38
% RECOVERY	69.09	69.09	70.21	72.46	78.52	74.84
OVERALL STD DEV (S)	35.14	22.56	67.45	24.87	82.72	46.84
OVERALL REL STD DEV, %	10.60	8.16	20.02	8.59	21.95	15.65
SINGLE STD DEV, (SR)	14.12		34.63		17.80	
ANALYST REL DEV, %	4.64		11.05		5.26	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 110. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR DIHYDROSAFROLE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	9	9	6	7	10	10
TRUE CONC (C) UG/L	13.60	9.60	13.60	9.60	13.60	9.60
MEAN RECOVERY (X)	12.21	7.95	13.40	7.80	13.01	8.02
% RECOVERY	89.75	82.77	98.53	81.26	95.66	83.55
OVERALL STD DEV (S)	3.05	1.51	0.47	1.00	3.15	2.20
OVERALL REL STD DEV, %	25.01	18.98	3.53	12.83	24.20	27.48
SINGLE STD DEV, (SR)	1.79		0.75		0.89	
ANALYST REL DEV, %	17.79		7.09		8.42	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	9	9	8	8	10	10
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	96.31	79.72	96.96	78.56	99.90	80.57
% RECOVERY	80.26	83.04	80.72	81.84	83.25	83.93
OVERALL STD DEV (S)	17.60	10.77	12.35	12.29	17.74	12.63
OVERALL REL STD DEV, %	18.27	13.51	12.76	15.64	17.76	15.68
SINGLE STD DEV, (SR)	8.82		4.89		8.06	
ANALYST REL DEV, %	10.03		5.58		8.93	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	9	9	8	8	10	10
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	325.89	287.67	316.00	292.88	364.20	318.60
% RECOVERY	67.89	71.92	65.83	73.22	75.87	79.65
OVERALL STD DEV (S)	66.55	43.36	68.59	39.35	126.95	93.59
OVERALL REL STD DEV, %	20.42	15.25	21.71	13.44	34.86	29.38
SINGLE STD DEV, (SR)	22.32		35.57		29.58	
ANALYST REL DEV, %	7.28		11.68		8.67	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE III. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 1,3-DINITROBENZENE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	9	9	7	7	9	9
TRUE CONC (C) UG/L	64.00	48.00	64.00	48.00	64.00	48.00
MEAN RECOVERY (X)	48.29	35.68	54.07	37.64	52.17	36.31
% RECOVERY	75.45	74.33	84.49	78.42	81.51	75.65
OVERALL STD DEV (S)	13.52	8.56	6.61	4.51	12.06	8.75
OVERALL REL STD DEV, %	28.01	24.00	12.22	11.97	23.11	24.10
SINGLE STD DEV, (SR)	7.65		3.30		4.61	
ANALYST REL DEV, %	18.23		7.21		10.42	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	9	9	8	8	9	9
TRUE CONC (C) UG/L	200.00	160.00	200.00	160.00	200.00	160.00
MEAN RECOVERY (X)	169.11	144.78	171.98	133.27	194.00	153.22
% RECOVERY	84.56	90.49	85.94	83.30	97.00	95.76
OVERALL STD DEV (S)	33.27	14.70	19.59	24.14	30.28	21.29
OVERALL REL STD DEV, %	19.67	10.16	11.40	18.11	15.61	13.90
SINGLE STD DEV, (SR)	16.51		13.99		14.80	
ANALYST REL DEV, %	10.52		9.17		8.53	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	9	9	8	8	9	9
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	460.00	400.00
MEAN RECOVERY (X)	414.33	351.56	365.88	325.38	459.67	378.22
% RECOVERY	86.32	87.89	76.22	81.34	95.56	94.56
OVERALL STD DEV (S)	80.51	32.77	80.31	41.19	106.33	103.31
OVERALL REL STD DEV, %	19.43	9.32	21.95	12.66	23.18	27.31
SINGLE STD DEV, (SR)	42.13		44.59		16.13	
ANALYST REL DEV, %	11.00		12.90		3.86	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 112. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR CHLOROBENZILATE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	8	7	7	6	6	6
TRUE CONC (C) UG/L	13.60	9.60	13.60	9.60	13.60	9.60
MEAN RECOVERY (X)	3.72	2.50	3.06	2.68	2.71	1.29
% RECOVERY	27.33	26.09	22.47	27.88	19.95	13.45
OVERALL STD DEV (S)	3.40	2.44	2.31	1.47	1.30	0.88
OVERALL REL STD DEV, %	91.38	97.46	75.60	55.05	47.95	68.22
SINGLE STD DEV, (SR)	1.28		0.67		0.51	
ANALYST REL DEV, %	41.19		23.49		25.43	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	8	8	7	7	6	6
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	29.03	24.50	39.41	31.17	22.92	18.50
% RECOVERY	24.19	25.52	32.85	32.47	19.02	19.27
OVERALL STD DEV (S)	26.86	21.42	31.25	25.72	12.96	12.21
OVERALL REL STD DEV, %	92.51	87.44	79.29	82.51	56.80	65.97
SINGLE STD DEV, (SR)	5.78		4.69		7.28	
ANALYST REL DEV, %	21.60		13.27		35.21	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	8	8	7	7	6	6
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	142.81	110.80	193.00	139.50	103.97	87.67
% RECOVERY	29.75	27.70	40.21	34.87	21.64	21.92
OVERALL STD DEV (S)	97.98	84.18	83.03	81.47	63.56	44.92
OVERALL REL STD DEV, %	68.61	75.98	43.02	58.40	61.19	51.24
SINGLE STD DEV, (SR)	20.06		9.99		15.97	
ANALYST REL DEV, %	15.82		6.01		16.65	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 113. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR REPONE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	9	9	8	7	7	7
TRUE CONC (C) UG/L	24.00	20.00	24.00	20.00	24.00	20.00
MEAN RECOVERY (X)	15.17	12.12	7.38	5.86	15.32	10.31
% RECOVERY	63.19	60.61	30.75	29.32	63.85	51.57
OVERALL STD DEV (S)	3.22	2.48	4.32	2.99	5.18	4.14
OVERALL REL STD DEV, %	21.23	20.46	58.47	50.99	33.80	40.14
SINGLE STD DEV, (SR)	2.50		2.50		2.23	
ANALYST REL DEV, %	18.35		37.69		17.40	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	8	9	9	9	7	7
TRUE CONC (C) UG/L	160.00	120.00	160.00	120.00	160.00	120.00
MEAN RECOVERY (X)	129.00	99.30	62.48	50.23	124.17	97.34
% RECOVERY	80.62	82.75	39.05	41.86	77.61	91.12
OVERALL STD DEV (S)	14.04	8.32	17.97	20.84	33.99	15.23
OVERALL REL STD DEV, %	10.88	8.38	28.76	41.48	27.37	15.65
SINGLE STD DEV, (SR)	8.13		15.58		19.12	
ANALYST REL DEV, %	7.13		27.64		17.26	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	9	9	9	9	7	7
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	410.11	343.00	243.23	176.52	392.71	319.43
% RECOVERY	85.44	85.75	50.67	44.13	81.82	79.86
OVERALL STD DEV (S)	65.94	60.70	105.71	56.11	58.50	29.85
OVERALL REL STD DEV, %	16.08	17.70	43.46	31.78	14.90	9.35
SINGLE STD DEV, (SR)	42.36		45.09		43.01	
ANALYST REL DEV, %	11.25		21.49		12.08	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 114. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 2-METHYLPHENOL ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	10	10	7	7	8	8
TRUE CONC (C) UG/L	24.00	20.00	24.00	20.00	24.00	20.00
MEAN RECOVERY (X)	16.49	13.62	24.20	19.73	15.91	13.26
% RECOVERY	68.71	68.11	100.83	98.64	66.31	66.31
OVERALL STD DEV (S)	3.61	4.22	3.42	5.56	4.29	2.43
OVERALL REL STD DEV, %	21.87	30.99	14.14	28.18	26.93	16.29
SINGLE STD DEV, (SR)	1.30		2.27		3.08	
ANALYST REL DEV, %	8.67		10.35		21.14	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	10	10	7	7	8	8
TRUE CONC (C) UG/L	160.00	120.00	160.00	120.00	160.00	120.00
MEAN RECOVERY (X)	129.70	93.05	122.34	91.00	114.37	88.92
% RECOVERY	81.06	77.54	76.46	75.83	71.48	74.10
OVERALL STD DEV (S)	23.98	19.83	15.25	11.92	21.78	14.13
OVERALL REL STD DEV, %	18.49	21.31	12.47	13.10	19.05	15.89
SINGLE STD DEV, (SR)	6.61		10.18		8.96	
ANALYST REL DEV, %	5.94		9.55		8.81	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	9	9	7	7	9	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	356.33	292.22	376.71	327.29	347.38	285.13
% RECOVERY	74.24	73.06	78.48	81.82	72.37	71.28
OVERALL STD DEV (S)	72.53	50.84	53.07	46.17	46.14	38.43
OVERALL REL STD DEV, %	20.35	17.40	14.09	14.11	13.28	13.48
SINGLE STD DEV, (SR)	39.55		38.38		14.49	
ANALYST REL DEV, %	12.20		10.90		4.58	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 115. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR ACETOPHENONE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	10	10	10	10	8	8
TRUE CONC (C) UG/L	12.00	9.60	12.00	9.60	12.00	9.60
MEAN RECOVERY (X)	9.99	7.77	12.85	9.09	10.28	7.03
% RECOVERY	83.27	80.94	107.07	94.70	85.64	73.22
OVERALL STD DEV (S)	2.01	1.76	3.54	3.50	1.61	1.39
OVERALL REL STD DEV, %	20.15	22.63	27.58	38.50	15.66	19.76
SINGLE STD DEV, (SR)	0.52		0.83		0.57	
ANALYST REL DEV, %	5.90		7.55		6.62	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	10	10	9	9	8	8
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	106.70	83.46	101.16	79.66	97.24	80.56
% RECOVERY	88.92	86.94	84.30	82.97	81.03	83.92
OVERALL STD DEV (S)	16.32	18.05	9.70	5.63	13.97	8.21
OVERALL REL STD DEV, %	15.30	21.62	9.59	7.07	14.36	10.19
SINGLE STD DEV, (SR)	5.57		5.39		7.80	
ANALYST REL DEV, %	5.85		5.96		8.78	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	10	10	10	10	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	395.10	303.80	365.50	328.20	366.00	292.25
% RECOVERY	82.31	75.95	76.15	82.05	76.25	73.06
OVERALL STD DEV (S)	46.83	43.18	91.00	73.27	46.95	35.74
OVERALL REL STD DEV, %	11.85	14.21	24.90	22.32	12.83	12.23
SINGLE STD DEV, (SR)	54.81		41.79		18.95	
ANALYST REL DEV, %	15.68		12.05		5.76	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 116. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR N-NITROSOPIPERIDINE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	8	8	8	8	8	8
TRUE CONC (C) UG/L	12.00	9.60	12.00	9.60	12.00	9.60
MEAN RECOVERY (X)	10.57	8.06	14.12	11.46	10.46	7.37
% RECOVERY	88.12	83.93	117.71	119.43	87.20	76.76
OVERALL STD DEV (S)	0.82	1.06	3.24	4.49	2.26	1.23
OVERALL REL STD DEV, %	7.76	13.10	22.94	39.19	21.60	16.70
SINGLE STD DEV, (SR)	0.62		1.87		0.98	
ANALYST REL DEV, %	6.69		14.59		10.94	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	8	8	8	7	8	8
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	111.12	87.10	106.86	85.86	103.94	83.26
% RECOVERY	92.60	90.73	89.05	89.43	86.61	86.73
OVERALL STD DEV (S)	15.26	16.43	17.41	13.65	14.20	13.04
OVERALL REL STD DEV, %	13.73	18.86	16.30	15.89	13.67	15.66
SINGLE STD DEV, (SR)	5.98		13.76		7.65	
ANALYST REL DEV, %	6.04		14.28		8.18	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	8	6	8	8	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	460.88	356.00	400.63	361.63	407.25	305.38
% RECOVERY	96.02	89.00	83.46	90.41	84.94	76.34
OVERALL STD DEV (S)	79.95	10.94	78.95	32.36	30.01	61.47
OVERALL REL STD DEV, %	17.35	3.07	19.71	8.95	7.37	20.13
SINGLE STD DEV, (SR)	32.15		50.00		52.36	
ANALYST REL DEV, %	7.87		13.12		14.69	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 117. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR HEXACHLOROPROPENE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	9	9	9	8	9	8
TRUE CONC (C) UG/L	12.00	9.60	12.00	9.60	12.00	9.60
MEAN RECOVERY (X)	5.88	4.57	4.93	3.97	5.69	4.16
% RECOVERY	49.01	47.57	41.11	41.35	47.46	43.29
OVERALL STD DEV (S)	2.24	2.06	1.91	1.69	2.22	1.61
OVERALL REL STD DEV, %	38.03	45.19	38.77	42.59	38.98	38.69
SINGLE STD DEV, (SR)	0.60		1.53		0.73	
ANALYST REL DEV, %	11.50		34.30		14.74	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	9	9	8	7	8	8
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	76.27	55.98	69.57	59.91	67.72	57.02
% RECOVERY	63.56	58.31	57.98	62.41	56.44	59.40
OVERALL STD DEV (S)	25.93	19.50	21.57	9.47	18.58	10.31
OVERALL REL STD DEV, %	34.00	34.83	31.01	15.80	27.43	18.08
SINGLE STD DEV, (SR)	10.91		4.45		7.27	
ANALYST REL DEV, %	16.49		6.89		11.65	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	9	9	8	8	7	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	302.00	247.78	304.25	278.25	259.71	243.13
% RECOVERY	62.92	61.94	63.39	69.56	54.11	60.78
OVERALL STD DEV (S)	77.98	71.40	82.24	71.46	45.33	70.20
OVERALL REL STD DEV, %	25.82	28.82	27.03	25.68	17.46	28.88
SINGLE STD DEV, (SR)	24.72		16.94		12.04	
ANALYST REL DEV, %	8.99		5.82		4.79	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 118. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR SAFROLE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	10	10	9	9	10	10
TRUE CONC (C) UG/L	24.00	20.00	24.00	20.00	24.00	20.00
MEAN RECOVERY (X)	19.08	16.20	20.53	16.54	20.58	16.99
% RECOVERY	79.50	81.00	85.56	82.72	85.75	84.95
OVERALL STD DEV (S)	3.34	2.41	3.47	2.99	4.51	4.49
OVERALL REL STD DEV, %	17.49	14.89	16.89	18.07	21.90	26.46
SINGLE STD DEV, (SR)	1.44		1.37		1.92	
ANALYST REL DEV, %	8.14		7.40		10.21	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	10	10	9	9	10	10
TRUE CONC (C) UG/L	160.00	120.00	160.00	120.00	160.00	120.00
MEAN RECOVERY (X)	135.80	98.91	117.19	94.78	127.20	97.07
% RECOVERY	84.87	82.42	73.24	78.98	79.50	80.89
OVERALL STD DEV (S)	18.97	16.39	27.67	17.23	19.14	16.57
OVERALL REL STD DEV, %	13.89	16.57	23.61	18.18	15.05	17.07
SINGLE STD DEV, (SR)	7.27		16.00		9.40	
ANALYST REL DEV, %	6.20		15.09		8.38	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	10	10	9	9	10	10
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	371.50	322.60	338.33	309.11	347.10	300.00
% RECOVERY	77.40	80.65	70.49	77.28	72.31	75.00
OVERALL STD DEV (S)	57.80	55.27	85.40	56.00	60.84	54.83
OVERALL REL STD DEV, %	15.56	17.13	25.24	18.12	17.53	18.28
SINGLE STD DEV, (SR)	50.11		38.95		15.83	
ANALYST REL DEV, %	14.44		12.03		4.89	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 119. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 2,4,5-TRICHLOROPHENOL ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	8	8	7	8	9	9
TRUE CONC (C) UG/L	68.00	46.00	68.00	46.00	68.00	46.00
MEAN RECOVERY (X)	53.42	33.19	62.01	39.07	56.44	36.37
% RECOVERY	78.57	72.15	91.20	84.95	83.01	79.06
OVERALL STD DEV (S)	5.52	4.91	2.70	3.92	8.92	9.22
OVERALL REL STD DEV, %	10.34	14.81	4.35	10.04	15.80	25.35
SINGLE STD DEV, (SR)	2.49		1.67		3.83	
ANALYST REL DEV, %	5.75		3.29		8.25	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	8	8	8	8	9	9
TRUE CONC (C) UG/L	200.00	160.00	200.00	160.00	200.00	160.00
MEAN RECOVERY (X)	175.25	140.50	165.38	142.88	167.00	136.44
% RECOVERY	87.62	87.81	82.69	89.30	83.50	85.28
OVERALL STD DEV (S)	16.44	15.95	15.41	15.03	14.64	13.25
OVERALL REL STD DEV, %	9.38	11.35	9.32	10.52	8.76	9.71
SINGLE STD DEV, (SR)	10.03		10.54		9.73	
ANALYST REL DEV, %	6.36		6.84		6.42	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	8	8	8	8	9	9
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	432.00	359.13	414.50	355.13	395.67	337.33
% RECOVERY	90.00	89.78	86.35	88.78	82.43	84.33
OVERALL STD DEV (S)	59.20	54.74	88.36	61.20	68.59	50.13
OVERALL REL STD DEV, %	13.70	15.24	21.32	17.23	17.34	14.86
SINGLE STD DEV, (SR)	18.39		32.13		23.73	
ANALYST REL DEV, %	4.65		8.35		6.47	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 120. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 1,4-DINITROBENZENE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	8	8	7	7	8	8
TRUE CONC (C) UG/L	68.00	46.00	68.00	46.00	68.00	46.00
MEAN RECOVERY (X)	52.90	32.95	57.01	34.00	56.41	34.40
% RECOVERY	77.89	71.63	83.84	73.91	82.96	74.78
OVERALL STD DEV (S)	7.28	6.50	4.01	4.81	10.31	7.11
OVERALL REL STD DEV, %	13.75	19.72	7.03	14.15	18.28	20.67
SINGLE STD DEV, (SR)	1.74		2.60		6.09	
ANALYST REL DEV, %	4.06		5.70		13.41	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	8	8	6	7	8	8
TRUE CONC (C) UG/L	200.00	160.00	200.00	160.00	200.00	160.00
MEAN RECOVERY (X)	172.75	139.00	166.33	139.43	176.63	135.75
% RECOVERY	86.37	86.87	83.17	87.14	88.31	84.84
OVERALL STD DEV (S)	22.44	15.89	6.35	7.46	24.15	10.71
OVERALL REL STD DEV, %	12.99	11.43	3.81	5.35	13.67	7.89
SINGLE STD DEV, (SR)	9.78		5.51		15.37	
ANALYST REL DEV, %	6.28		3.60		9.84	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	8	8	7	7	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	452.13	353.38	398.57	350.00	432.13	359.75
% RECOVERY	94.19	88.34	83.04	87.50	90.03	89.94
OVERALL STD DEV (S)	44.92	43.13	84.48	45.76	44.41	39.39
OVERALL REL STD DEV, %	9.93	12.20	21.20	13.07	10.28	10.95
SINGLE STD DEV, (SR)	23.57		55.51		25.57	
ANALYST REL DEV, %	5.85		14.83		6.46	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 121. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR PENTACHLOROBENZENE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	10	10	9	9	9	9
TRUE CONC (C) UG/L	12.00	9.60	12.00	9.60	12.00	9.60
MEAN RECOVERY (X)	10.17	7.67	10.39	7.27	10.22	7.55
% RECOVERY	84.72	79.85	86.62	75.74	85.17	78.69
OVERALL STD DEV (S)	1.87	1.61	1.72	1.97	2.20	2.36
OVERALL REL STD DEV, %	18.38	21.01	16.51	27.05	21.54	31.21
SINGLE STD DEV, (SR)	0.40		0.44		0.80	
ANALYST REL DEV, %	4.45		5.02		9.00	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	10	9	8	9	9	9
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	100.86	83.04	97.76	78.17	93.97	75.44
% RECOVERY	84.05	86.50	81.47	81.42	78.31	78.59
OVERALL STD DEV (S)	7.82	5.09	9.77	6.09	9.92	7.40
OVERALL REL STD DEV, %	7.75	6.12	9.99	7.79	10.55	9.81
SINGLE STD DEV, (SR)	3.84		6.27		5.41	
ANALYST REL DEV, %	4.17		7.12		6.39	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	10	10	9	9	9	9
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	365.10	299.00	352.00	316.44	335.89	282.89
% RECOVERY	76.06	74.75	73.33	79.11	69.98	70.72
OVERALL STD DEV (S)	36.80	29.55	72.34	39.19	49.75	43.84
OVERALL REL STD DEV, %	10.08	9.88	20.55	12.38	14.81	15.50
SINGLE STD DEV, (SR)	20.03		30.10		15.37	
ANALYST REL DEV, %	6.03		9.01		4.97	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 122. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 2,3,4,6-TETRACHLOROPHENOL ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	8	8	8	8	8	8
TRUE CONC (C) UG/L	68.00	46.00	68.00	46.00	68.00	46.00
MEAN RECOVERY (X)	53.87	32.95	53.79	33.87	53.91	34.57
% RECOVERY	79.23	71.41	79.10	73.64	79.28	75.16
OVERALL STD DEV (S)	6.00	4.82	10.86	11.45	7.60	6.69
OVERALL REL STD DEV, %	11.14	14.66	20.19	33.79	14.09	25.70
SINGLE STD DEV, (SR)	4.72		4.55		5.02	
ANALYST REL DEV, %	10.89		10.39		11.35	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	8	8	8	8	8	8
TRUE CONC (C) UG/L	200.00	160.00	200.00	160.00	200.00	160.00
MEAN RECOVERY (X)	168.75	136.00	151.25	132.66	155.00	127.88
% RECOVERY	84.38	85.00	75.62	82.91	77.50	79.92
OVERALL STD DEV (S)	15.54	18.65	26.00	23.66	22.51	17.76
OVERALL REL STD DEV, %	9.21	13.72	17.19	17.83	14.52	13.89
SINGLE STD DEV, (SR)	7.70		8.42		16.28	
ANALYST REL DEV, %	5.05		5.93		11.51	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	8	7	8	8	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	424.50	340.29	404.50	345.38	383.75	319.38
% RECOVERY	88.44	85.07	84.27	86.34	79.95	79.84
OVERALL STD DEV (S)	47.76	17.05	87.70	66.32	48.85	43.36
OVERALL REL STD DEV, %	11.25	5.01	21.68	19.20	12.73	13.58
SINGLE STD DEV, (SR)	25.86		32.40		20.39	
ANALYST REL DEV, %	6.76		8.64		5.80	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 123. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR DIPHENYLAMINE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	7	7	8	8	9	9
TRUE CONC (C) UG/L	12.00	9.60	12.00	9.60	12.00	9.60
MEAN RECOVERY (X)	9.97	7.66	11.74	8.46	12.13	8.56
% RECOVERY	83.11	79.81	97.86	88.10	101.11	89.18
OVERALL STD DEV (S)	2.16	1.69	1.30	1.27	3.05	1.89
OVERALL REL STD DEV, %	21.61	22.09	11.09	15.07	25.14	22.10
SINGLE STD DEV, (SR)	0.45		0.32		1.53	
ANALYST REL DEV, %	5.11		3.16		14.83	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	7	7	9	9	9	8
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	113.89	85.06	110.11	90.73	113.71	85.80
% RECOVERY	94.90	88.60	91.76	94.51	94.76	89.37
OVERALL STD DEV (S)	21.90	8.52	30.56	16.97	14.61	5.13
OVERALL REL STD DEV, %	19.23	10.02	27.76	18.70	12.85	5.97
SINGLE STD DEV, (SR)	10.42		17.74		6.62	
ANALYST REL DEV, %	10.48		17.67		6.63	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	5	7	9	9	9	9
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	435.60	329.29	387.11	343.00	426.56	338.89
% RECOVERY	90.75	82.32	80.65	85.75	88.87	84.72
OVERALL STD DEV (S)	13.72	73.59	92.21	67.52	84.69	60.56
OVERALL REL STD DEV, %	3.15	22.35	23.82	19.69	19.85	17.87
SINGLE STD DEV, (SR)	40.63		49.31		28.23	
ANALYST REL DEV, %	10.62		15.51		7.38	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 124. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR PENTACHLORONITROBENZENE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	7	7	8	8	8	8
TRUE CONC (C) UG/L	68.00	46.00	68.00	46.00	69.00	46.00
MEAN RECOVERY (X)	52.20	36.19	54.31	34.85	56.41	38.39
% RECOVERY	76.76	78.66	79.97	75.76	82.90	83.45
OVERALL STD DEV (S)	7.83	8.04	5.10	5.04	5.12	8.65
OVERALL REL STD DEV, %	15.01	22.22	9.40	14.48	9.08	23.05
SINGLE STD DEV, (SR)	0.96		3.79		5.49	
ANALYST REL DEV, %	2.18		8.50		11.57	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	7	7	8	8	8	8
TRUE CONC (C) UG/L	200.00	160.00	200.00	160.00	200.00	160.00
MEAN RECOVERY (X)	176.43	139.14	146.88	130.38	164.25	135.75
% RECOVERY	88.21	86.96	73.44	81.48	82.12	84.84
OVERALL STD DEV (S)	26.69	12.20	37.26	13.55	22.70	7.03
OVERALL REL STD DEV, %	15.13	8.77	25.37	10.40	13.82	5.18
SINGLE STD DEV, (SR)	17.45		22.63		12.01	
ANALYST REL DEV, %	11.06		16.33		8.00	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	7	7	8	8	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	434.86	327.71	397.50	334.88	393.38	324.38
% RECOVERY	90.60	81.93	82.81	83.72	81.95	81.09
OVERALL STD DEV (S)	48.49	31.69	106.36	48.30	29.90	39.04
OVERALL REL STD DEV, %	11.15	9.67	26.76	14.42	7.60	12.03
SINGLE STD DEV, (SR)	42.68		56.31		27.19	
ANALYST REL DEV, %	11.19		15.38		7.58	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 125. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 2-SEC-BUTYL- 4,6-DINITROPHENOL ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	7	7	7	7	8	8
TRUE CONC (C) UG/L	69.00	46.00	68.00	46.00	68.00	46.00
MEAN RECOVERY (X)	46.36	26.70	47.91	29.50	45.44	25.57
% RECOVERY	68.17	58.03	70.46	64.13	66.82	55.60
OVERALL STD DEV (S)	10.93	11.24	7.14	3.71	12.99	7.26
OVERALL REL STD DEV, %	23.56	42.10	14.91	12.59	28.58	28.39
SINGLE STD DEV, (SR)	3.52		4.16		7.49	
ANALYST REL DEV, %	9.62		10.76		21.10	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	7	7	7	7	8	8
TRUE CONC (C) UG/L	200.00	160.00	200.00	160.00	200.00	160.00
MEAN RECOVERY (X)	172.71	141.57	171.29	141.69	180.13	135.19
% RECOVERY	86.36	88.48	85.64	88.55	90.06	84.49
OVERALL STD DEV (S)	39.83	20.15	52.84	34.93	43.69	23.42
OVERALL REL STD DEV, %	23.06	14.23	30.85	24.66	24.25	17.32
SINGLE STD DEV, (SR)	21.63		19.33		21.62	
ANALYST REL DEV, %	13.77		12.35		13.71	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	7	7	7	6	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	467.57	356.29	459.86	379.00	500.88	385.38
% RECOVERY	97.41	89.07	95.80	94.75	104.35	96.34
OVERALL STD DEV (S)	74.71	73.60	84.56	25.07	136.95	77.15
OVERALL REL STD DEV, %	15.98	20.66	18.39	6.61	27.34	20.02
SINGLE STD DEV, (SR)	39.35		57.01		86.10	
ANALYST REL DEV, %	9.55		13.59		19.43	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 126. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 7,12-DIMETHYLBENZ(A)ANTHRACENE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	7	7	7	7	6	6
TRUE CONC (C) UG/L	24.00	20.00	24.00	20.00	24.00	20.00
MEAN RECOVERY (X)	11.62	10.64	7.82	5.89	10.01	8.12
% RECOVERY	48.41	53.20	32.57	29.44	41.70	40.58
OVERALL STD DEV (S)	11.51	10.83	6.29	6.10	5.30	3.48
OVERALL REL STD DEV, %	99.03	101.76	80.49	103.62	52.94	42.88
SINGLE STD DEV, (SR)	1.29		1.92		1.45	
ANALYST REL DEV, %	11.59		28.06		16.00	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	9	9	7	7	9	9
TRUE CONC (C) UG/L	160.00	120.00	160.00	120.00	160.00	120.00
MEAN RECOVERY (X)	57.66	42.28	47.74	43.33	75.42	62.46
% RECOVERY	36.03	35.23	29.84	36.11	47.14	52.05
OVERALL STD DEV (S)	31.70	26.05	27.79	27.46	34.76	22.67
OVERALL REL STD DEV, %	54.98	61.60	58.22	63.37	46.09	36.30
SINGLE STD DEV, (SR)	6.73		10.12		14.13	
ANALYST REL DEV, %	13.47		22.22		20.49	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	9	9	8	8	8	9
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	351.23	242.22	216.77	171.46	368.55	246.12
% RECOVERY	73.17	60.56	45.16	42.87	76.78	61.53
OVERALL STD DEV (S)	206.55	108.11	113.66	95.62	203.22	128.06
OVERALL REL STD DEV, %	58.81	44.63	52.43	55.77	55.14	52.03
SINGLE STD DEV, (SR)	93.91		44.72		112.93	
ANALYST REL DEV, %	31.62		23.06		36.76	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 127. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 3-METHYCHOLANTHRENE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	7	7	7	7	7	7
TRUE CONC (C) UG/L	24.00	20.00	24.00	20.00	24.00	20.00
MEAN RECOVERY (X)	120.02	122.65	217.84	170.07	115.94	100.09
% RECOVERY	500.07	613.25	907.68	850.37	483.09	500.43
OVERALL STD DEV (S)	137.41	139.33	192.87	157.91	144.82	115.10
OVERALL REL STD DEV, %	114.50	113.60	88.54	92.85	124.91	115.00
SINGLE STD DEV, (SR)	26.35		30.65		28.69	
ANALYST REL DEV, %	21.72		15.80		26.56	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	8	8	7	7	8	8
TRUE CONC (C) UG/L	160.00	120.00	160.00	120.00	160.00	120.00
MEAN RECOVERY (X)	1144.52	818.89	1082.59	1116.04	1386.90	994.60
% RECOVERY	715.33	682.41	676.62	930.03	866.81	828.83
OVERALL STD DEV (S)	1313.49	1042.83	1025.92	954.10	1507.45	1040.36
OVERALL REL STD DEV, %	114.76	127.35	94.77	85.49	108.69	104.60
SINGLE STD DEV, (SR)	254.26		337.42		342.23	
ANALYST REL DEV, %	25.90		30.69		28.74	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	8	8	7	7	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	4345.98	3510.17	5205.57	4777.14	4185.88	3299.25
% RECOVERY	905.39	877.54	1084.49	1194.28	872.06	824.81
OVERALL STD DEV (S)	4559.38	3559.22	5000.17	4332.92	4505.07	3602.02
OVERALL REL STD DEV, %	104.89	101.40	96.05	90.70	110.01	109.18
SINGLE STD DEV, (SR)	881.57		864.27		757.64	
ANALYST REL DEV, %	22.44		17.32		20.24	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 128. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR DIBENZO(A,E)PYRENE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	7	7	5	6	8	8
TRUE CONC (C) UG/L	68.00	46.00	68.00	46.00	68.00	46.00
MEAN RECOVERY (X)	59.84	31.86	47.52	28.35	64.31	35.05
% RECOVERY	88.00	69.26	69.88	61.63	94.58	76.19
OVERALL STD DEV (S)	31.89	23.01	2.54	15.79	45.90	26.50
OVERALL REL STD DEV, %	53.28	72.21	5.35	55.71	71.37	75.62
SINGLE STD DEV, (SR)	11.44		8.95		17.15	
ANALYST REL DEV, %	24.95		23.60		34.52	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	7	7	8	8	9	9
TRUE CONC (C) UG/L	200.00	160.00	200.00	160.00	200.00	160.00
MEAN RECOVERY (X)	199.16	169.24	143.60	107.94	427.44	219.76
% RECOVERY	99.58	105.78	71.80	67.46	213.72	137.35
OVERALL STD DEV (S)	92.80	90.62	55.91	54.23	425.32	94.69
OVERALL REL STD DEV, %	46.59	53.54	38.93	50.25	99.50	43.09
SINGLE STD DEV, (SR)	41.59		47.02		266.82	
ANALYST REL DEV, %	22.58		37.39		82.45	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	7	7	8	8	7	9
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	471.14	429.57	520.25	396.25	532.86	884.54
% RECOVERY	98.15	107.39	108.39	99.06	111.01	221.14
OVERALL STD DEV (S)	183.80	194.55	181.22	166.15	200.41	795.52
OVERALL REL STD DEV, %	39.01	45.29	34.83	41.93	37.61	89.94
SINGLE STD DEV, (SR)	39.87		142.37		111.30	
ANALYST REL DEV, %	8.85		31.07		15.71	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 129. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR ETHYL METHANE SULFONATE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	9	9	9	9	7	7
TRUE CONC (C) UG/L	12.00	9.60	12.00	9.60	12.00	9.60
MEAN RECOVERY (X)	9.99	7.60	12.02	8.91	10.60	7.26
% RECOVERY	83.29	79.13	100.20	92.86	88.31	75.61
OVERALL STD DEV (S)	1.29	1.65	1.70	2.06	0.88	1.72
OVERALL REL STD DEV, %	12.92	21.67	14.17	23.08	8.34	23.66
SINGLE STD DEV, (SR)	0.47		0.97		0.88	
ANALYST REL DEV, %	5.38		9.25		9.86	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	9	9	9	9	6	7
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	100.43	76.33	104.31	97.02	93.97	79.11
% RECOVERY	83.69	79.51	86.93	90.65	78.31	82.41
OVERALL STD DEV (S)	12.91	13.69	16.84	10.98	2.24	7.23
OVERALL REL STD DEV, %	12.85	17.93	16.15	12.62	2.38	9.14
SINGLE STD DEV, (SR)	5.90		7.99		4.10	
ANALYST REL DEV, %	6.68		8.35		4.74	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	9	9	9	9	7	7
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	395.33	302.44	419.11	379.67	377.00	313.71
% RECOVERY	82.36	75.61	87.31	94.92	78.54	78.43
OVERALL STD DEV (S)	51.06	23.52	76.95	38.57	33.59	35.41
OVERALL REL STD DEV, %	12.92	7.78	18.36	10.16	8.91	11.29
SINGLE STD DEV, (SR)	41.81		44.24		25.51	
ANALYST REL DEV, %	11.98		11.08		7.39	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 130. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 1,2-DIBROMO-3-CHLOROPROPANE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	9	9	10	10	8	6
TRUE CONC (C) UG/L	24.00	20.00	24.00	20.00	24.00	20.00
MEAN RECOVERY (X)	9.60	6.30	8.50	5.96	8.93	6.30
% RECOVERY	40.00	31.52	35.41	29.82	37.20	31.49
OVERALL STD DEV (S)	2.76	2.30	2.31	2.30	3.14	0.43
OVERALL REL STD DEV, %	28.71	36.45	27.23	38.53	35.13	6.86
SINGLE STD DEV, (SR)	1.22		0.64		1.52	
ANALYST REL DEV, %	15.35		8.90		19.91	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	9	9	10	10	8	8
TRUE CONC (C) UG/L	160.00	120.00	160.00	120.00	160.00	120.00
MEAN RECOVERY (X)	96.07	76.44	75.51	68.65	87.49	70.37
% RECOVERY	60.04	63.70	47.19	57.21	54.68	58.65
OVERALL STD DEV (S)	15.65	17.32	17.08	13.05	8.37	9.89
OVERALL REL STD DEV, %	16.30	22.65	22.62	19.01	9.56	14.05
SINGLE STD DEV, (SR)	5.51		13.26		6.19	
ANALYST REL DEV, %	6.39		18.40		7.84	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	9	8	10	10	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	346.89	279.38	304.40	283.30	310.00	267.13
% RECOVERY	72.27	69.84	63.42	70.82	64.58	66.78
OVERALL STD DEV (S)	105.43	34.43	78.73	62.67	63.33	55.56
OVERALL REL STD DEV, %	30.39	12.32	25.86	22.12	20.43	20.80
SINGLE STD DEV, (SR)	57.05		30.92		15.86	
ANALYST REL DEV, %	18.22		10.52		5.50	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 131. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 1,2-DINITROBENZENE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	8	8	8	8	7	7
TRUE CONC (C) UG/L	24.00	20.00	24.00	20.00	24.00	20.00
MEAN RECOVERY (X)	18.35	15.10	19.60	16.52	18.56	15.21
% RECOVERY	76.46	75.50	81.67	82.62	77.32	76.07
OVERALL STD DEV (S)	2.56	2.45	2.26	3.15	1.97	2.98
OVERALL REL STD DEV, %	13.93	16.25	11.52	19.08	10.59	19.60
SINGLE STD DEV, (SR)	0.76		1.95		2.26	
ANALYST REL DEV, %	4.52		10.80		13.41	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	7	8	8	8	7	7
TRUE CONC (C) UG/L	160.00	120.00	160.00	120.00	160.00	120.00
MEAN RECOVERY (X)	140.86	106.14	123.91	101.22	139.57	102.56
% RECOVERY	88.04	88.45	77.45	84.35	87.23	85.46
OVERALL STD DEV (S)	6.57	10.12	35.51	18.98	15.70	9.78
OVERALL REL STD DEV, %	4.66	9.54	28.66	18.75	11.25	9.54
SINGLE STD DEV, (SR)	4.16		15.74		10.99	
ANALYST REL DEV, %	3.37		13.98		9.08	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	8	8	8	8	7	7
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	437.50	352.75	368.50	346.75	400.00	350.57
% RECOVERY	91.15	88.19	76.77	86.69	83.33	87.64
OVERALL STD DEV (S)	33.01	32.36	120.60	58.37	38.96	22.26
OVERALL REL STD DEV, %	7.54	9.17	32.73	16.83	9.74	6.35
SINGLE STD DEV, (SR)	27.72		50.91		16.51	
ANALYST REL DEV, %	7.02		14.23		4.40	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 132. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 1,3,5-TRINITROBENZENE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	7	7	6	6	8	8
TRUE CONC (C) UG/L	68.00	46.00	68.00	46.00	68.00	46.00
MEAN RECOVERY (X)	32.34	21.53	24.05	12.29	30.21	17.97
% RECOVERY	47.56	46.80	35.37	26.72	44.43	39.06
OVERALL STD DEV (S)	10.45	10.52	9.17	5.70	18.22	9.10
OVERALL REL STD DEV, %	32.31	43.89	38.11	46.38	60.31	50.65
SINGLE STD DEV, (SR)	1.20		3.09		8.27	
ANALYST REL DEV, %	4.45		16.99		34.34	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	7	7	6	6	8	8
TRUE CONC (C) UG/L	200.00	160.00	200.00	160.00	200.00	160.00
MEAN RECOVERY (X)	100.04	92.36	81.47	78.37	106.99	81.21
% RECOVERY	50.02	57.72	40.73	48.98	53.49	50.76
OVERALL STD DEV (S)	37.81	41.42	33.32	34.25	56.47	35.51
OVERALL REL STD DEV, %	37.79	44.85	40.89	43.70	52.78	43.72
SINGLE STD DEV, (SR)	24.40		18.35		21.92	
ANALYST REL DEV, %	25.37		22.96		23.29	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	7	7	5	6	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	359.71	227.71	203.50	232.83	284.50	211.72
% RECOVERY	74.94	56.93	42.42	58.21	59.27	52.93
OVERALL STD DEV (S)	72.64	66.05	48.11	117.26	106.11	95.17
OVERALL REL STD DEV, %	20.20	29.01	23.63	50.36	37.30	44.95
SINGLE STD DEV, (SR)	57.21		44.04		37.18	
ANALYST REL DEV, %	19.48		20.19		14.98	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 133. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR DIALLATE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	7	7	8	9	8	9
TRUE CONC (C) UG/L	12.00	9.60	12.00	9.60	12.00	9.60
MEAN RECOVERY (X)	9.62	7.64	10.82	7.50	10.80	8.22
% RECOVERY	80.20	79.60	90.21	78.15	90.00	85.64
OVERALL STD DEV (S)	1.18	0.86	0.61	0.82	1.04	1.09
OVERALL REL STD DEV, %	12.31	11.24	5.60	10.96	9.65	13.32
SINGLE STD DEV, (SR)	0.37		0.37		0.39	
ANALYST REL DEV, %	4.31		4.08		4.15	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	7	7	9	8	9	9
TRUE CONC (C) UG/L	120.00	96.00	120.00	96.00	120.00	96.00
MEAN RECOVERY (X)	101.14	77.73	93.84	79.25	105.07	85.86
% RECOVERY	84.29	80.97	78.20	82.55	87.56	89.43
OVERALL STD DEV (S)	16.76	6.25	23.59	4.85	12.97	14.31
OVERALL REL STD DEV, %	16.57	8.04	25.14	6.11	12.34	16.66
SINGLE STD DEV, (SR)	9.94		16.54		4.75	
ANALYST REL DEV, %	11.11		19.11		4.98	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	7	7	9	9	9	9
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	374.43	297.57	398.67	335.79	407.22	323.56
% RECOVERY	78.01	74.39	83.06	83.94	84.84	80.89
OVERALL STD DEV (S)	65.88	63.86	103.62	49.04	79.84	55.76
OVERALL REL STD DEV, %	17.59	21.46	25.99	14.60	19.61	17.23
SINGLE STD DEV, (SR)	29.00		53.93		33.04	
ANALYST REL DEV, %	8.63		14.68		9.04	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

TABLE 134. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

STATISTICAL SUMMARY FOR 4-NITROQUINOLINE-N-OXIDE ANALYSES BY WATER TYPE

	WATER 1		WATER 2		WATER 3	
LOW YOUDEN PAIR	5	6	5	6	5	6
NUMBER OF DATA POINTS	10	10	8	7	8	8
TRUE CONC (C) UG/L	68.00	46.00	68.00	46.00	68.00	46.00
MEAN RECOVERY (X)	28.69	16.47	35.31	14.13	30.14	15.95
% RECOVERY	42.19	35.80	51.93	30.71	44.32	34.67
OVERALL STD DEV (S)	11.21	10.92	12.74	6.42	13.02	11.74
OVERALL REL STD DEV, %	39.06	66.30	36.08	45.42	43.21	73.61
SINGLE STD DEV, (SR)	3.67		4.21		4.99	
ANALYST REL DEV, %	16.24		17.02		21.67	
MEDIUM YOUDEN PAIR	3	4	3	4	3	4
NUMBER OF DATA POINTS	10	10	8	8	8	8
TRUE CONC (C) UG/L	200.00	160.00	200.00	160.00	200.00	160.00
MEAN RECOVERY (X)	144.52	110.90	143.06	113.45	142.50	112.57
% RECOVERY	72.26	69.31	71.53	70.91	71.25	70.36
OVERALL STD DEV (S)	50.35	39.82	54.44	30.86	36.16	21.51
OVERALL REL STD DEV, %	34.84	35.90	38.05	32.49	25.37	19.11
SINGLE STD DEV, (SR)	16.64		32.69		17.80	
ANALYST REL DEV, %	13.03		25.49		13.96	
HIGH YOUDEN PAIR	1	2	1	2	1	2
NUMBER OF DATA POINTS	10	9	8	8	8	8
TRUE CONC (C) UG/L	480.00	400.00	480.00	400.00	480.00	400.00
MEAN RECOVERY (X)	532.40	316.33	399.88	364.38	465.38	344.13
% RECOVERY	110.92	79.08	83.10	91.09	96.95	86.03
OVERALL STD DEV (S)	177.03	82.80	126.33	85.20	153.15	95.06
OVERALL REL STD DEV, %	33.25	26.18	31.67	23.38	32.91	27.62
SINGLE STD DEV, (SR)	97.00		98.86		56.09	
ANALYST REL DEV, %	20.50		25.91		13.86	

WATER LEGEND

1 - REAGENT WATER
2 - GROUND WATER
3 - LEACHATE

APPENDIX D

EFFECT OF WATER TYPES

TABLE 135. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON N-NITROSOMETHYLETHYLAMINE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.09406

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.6095	-0.0906
LEACHATE	0.2104	-0.0300

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	347.89589	347.89589		
REG(WATER/REAGENT)	4	1.46184	0.36546	5.34	0.0005
ERROR	122	8.34352	0.06839		
TOTAL	127	357.70125			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.6095	(0.1954 , 1.0237)	-0.0906	(-0.1791 , -0.0020)
LEACHATE	0.2104	(-0.2192 , 0.6400)	-0.0300	(-0.1217 , 0.0617)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 136. STUDY 36,SW 846 METHOD 8270,SEMI-VOLATILES,GC-MS

EFFECT OF WATER TYPE ON N-NITROSODIETHYLAMINE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.08484

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.3529	-0.0634
LEACHATE	-0.1126	0.0220

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	424.29797	424.29797		
REG(WATER/REAGENT)	4	0.77572	0.19393	2.68	0.0341
ERROR	150	10.86851	0.07246		
TOTAL	155	435.94220			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.3529	(-0.0397 , 0.7455)	-0.0634	(-0.1484 , 0.0217)
LEACHATE	-0.1126	(-0.5169 , 0.2917)	0.0220	(-0.0657 , 0.1098)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 137. STUDY 36,SW 846 METHOD 8270,SEMI-VOLATILES,GC-MS

EFFECT OF WATER TYPE ON ANILINE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.02299

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.0867	0.0099
LEACHATE	0.1148	0.0137

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	366.51444	366.51444		
REG(WATER/REAGENT)	4	0.74800	0.18700	3.53	0.0089
ERROR	138	7.30904	0.05296		
TOTAL	143	374.57148			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.0867	(-0.2798 , 0.4531)	0.0099	(-0.0677 , 0.0876)
LEACHATE	0.1148	(-0.2495 , 0.4791)	0.0137	(-0.0639 , 0.0913)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 138. STUDY 36,SW 846 METHOD 8270,SEMI-VOLATILES,GC-MS

EFFECT OF WATER TYPE ON N-NITROSOPYRROLIDINE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.09122

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.6054	-0.0937
LEACHATE	0.2235	-0.0104

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	374.85941	374.85941		
REG(WATER/REAGENT)	4	1.50539	0.37635	6.70	0.0001
ERROR	135	7.58255	0.05617		
TOTAL	140	383.94734			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL		SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL	
GROUND WATER	0.6054	(0.2187 ,	0.9921)	-0.0937	(-0.1748 ,	-0.0125)
LEACHATE	0.2235	(-0.1447 ,	0.5917)	-0.0104	(-0.0889 ,	0.0681)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 139. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON A,A-DIMETHYLPHENETHYLAMINE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.22220

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-1.2164	0.1202
LEACHATE	-1.5266	0.2397

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	401.78683	401.78683		
REG(WATER/REAGENT)	4	11.88977	2.97244	5.10	0.0007
ERROR	133	77.44556	0.58230		
TOTAL	138	491.12215			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	-1.2164	(-2.7901 , 0.3574)	0.1202	(-0.2058 , 0.4462)
LEACHATE	-1.5266	(-2.9813 , -0.0719)	0.2397	(-0.0610 , 0.5405)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 140. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON P-CHLOROANILINE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.02647

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-0.1285	0.0198
LEACHATE	0.0569	-0.0048

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	244.06740	244.06740		
REG(WATER/REAGENT)	4	0.13912	0.03478	0.90	0.4683
ERROR	137	5.31813	0.03882		
TOTAL	142	249.52465			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	-0.1285	(-0.5174 , 0.2603)	0.0198	(-0.0594 , 0.0990)
LEACHATE	0.0569	(-0.3410 , 0.4548)	-0.0048	(-0.0859 , 0.0764)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 141. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON 2-NITROANILINE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.22493

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.4323	-0.0779
LEACHATE	0.0388	0.0175

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	332.52086	332.52086		
REG(WATER/REAGENT)	4	0.71094	0.17773	6.91	0.0000
ERROR	135	3.47434	0.02574		
TOTAL	140	336.70614			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.4323	(0.1289 , 0.7357)	-0.0779	(-0.1402 , -0.0156)
LEACHATE	0.0388	(-0.2864 , 0.3640)	0.0175	(-0.0491 , 0.0841)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 142. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON N-NITROSODI-N-BUTYLAMINE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 0.87473

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.1436	-0.0239
LEACHATE	-0.0299	0.0113

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	280.22532	280.22532		
REG(WATER/REAGENT)	4	0.11729	0.02932	0.76	0.5562
ERROR	147	5.70896	0.03884		
TOTAL	152	296.05156			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.1436	(-0.1498 , 0.4369)	-0.0239	(-0.0868 , 0.0390)
LEACHATE	-0.0299	(-0.3232 , 0.2635)	0.0113	(-0.0516 , 0.0742)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 143. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON 3-NITROANILINE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.11338

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-0.1135	0.0182
LEACHATE	0.0679	-0.0113

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	295.08630	295.08630		
REG(WATER/REAGENT)	4	0.07291	0.01823	0.27	0.8989
ERROR	140	9.56673	0.06833		
TOTAL	145	304.72594			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	-0.1135	(-0.6135 , 0.3865)	0.0182	(-0.0849 , 0.1213)
LEACHATE	0.0679	(-0.4295 , 0.5654)	-0.0113	(-0.1134 , 0.0909)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 144. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON 2-NAPHTHYLAMINE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.10034

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-2.3245	0.4007
LEACHATE	-0.0998	0.0317

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	577.79066	577.79066		
REG(WATER/REAGENT)	4	24.21575	6.05394	11.31	0.0000
ERROR	151	80.85897	0.53549		
TOTAL	156	682.86538			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	-2.3245	(-3.4118 , -1.2372)	0.4007	(0.1693 , 0.6322)
LEACHATE	-0.0998	(-1.1871 , 0.9875)	0.0317	(-0.1998 , 0.2631)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 145. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON 5-NITRO-O-TOLUIDINE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.06041

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-0.0100	-0.0013
LEACHATE	0.0323	0.0089

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	412.38669	412.38669		
REG(WATER/REAGENT)	4	0.23763	0.05941	0.96	0.4311
ERROR	144	8.90460	0.06184		
TOTAL	149	421.52892			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL		SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL	
GROUND WATER	-0.0100	(-0.3937 ,	0.3737)	-0.0013	(-0.0838 ,	0.0813)
LEACHATE	0.0323	(-0.3280 ,	0.3926)	0.0089	(-0.0685 ,	0.0863)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 146. STUDY 36/SW 846 METHOD 8270/SEMI-VOLATILES/GC-MS

EFFECT OF WATER TYPE ON P-NITROANILINE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.00628

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-0.5481	0.0906
LEACHATE	-0.3112	0.0499

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	135.26559	135.26559		
REG(WATER/REAGENT)	4	0.36618	0.09154	1.00	0.4098
ERROR	151	13.83036	0.09159		
TOTAL	156	149.46213			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	-0.5481	(-1.4344 , 0.3382)	0.0906	(-0.0808 , 0.2620)
LEACHATE	-0.3112	(-1.1463 , 0.5238)	0.0499	(-0.1114 , 0.2115)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 147. STUDY 36,SW 846 METHOD 8270,SEMI-VOLATILES,GC-MS

EFFECT OF WATER TYPE ON 1,2-DIPHENYLHYDRAZINE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 0.91939

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-0.0684	0.0033
LEACHATE	0.0304	0.0031

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	304.70500	304.70500		
REG(WATER/REAGENT)	4	0.23586	0.05897	0.87	0.4829
ERROR	143	9.67787	0.06768		
TOTAL	148	314.61874			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	-0.0684	(-0.4549 , 0.3180)	0.0033	(-0.0790 , 0.0856)
LEACHATE	0.0304	(-0.3696 , 0.4303)	0.0031	(-0.0825 , 0.0887)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 148. STUDY 36/SW 846 METHOD 8270/SEMI-VOLATILES/GC-MS

EFFECT OF WATER TYPE ON 4-AMINOBIPHENYL ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.04799

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-0.9369	0.1657
LEACHATE	0.2064	-0.0197

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	435.01909	435.01909		
REG(WATER/REAGENT)	4	5.15079	1.28770	8.81	0.0000
ERROR	149	21.77816	0.14616		
TOTAL	154	461.54803			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	-0.9369	(-1.4938 , -0.3801)	0.1657	(0.0470 , 0.2843)
LEACHATE	0.2064	(-0.3822 , 0.7949)	-0.0197	(-0.1450 , 0.1055)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 149. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON METHAPYRILENE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.19714

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.6731	-0.1617
LEACHATE	-0.5904	0.0660

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	389.87774	389.87774		
REG(WATER/REAGENT)	4	4.68312	1.17078	5.39	0.0005
ERROR	113	24.54569	0.21722		
TOTAL	118	419.10654			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.6731	(-0.1457 , 1.4919)	-0.1617	(-0.3365 , 0.0132)
LEACHATE	-0.5904	(-1.3591 , 0.1783)	0.0660	(-0.0992 , 0.2302)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 150. STUDY 36,SW 846 METHOD 8270,SEMI-VOLATILES,GC-MS

EFFECT OF WATER TYPE ON BENZIDINE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.21448

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-4.9071	0.6996
LEACHATE	-2.2330	0.3765

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	223.28407	223.28407		
REG(WATER/REAGENT)	4	41.17639	10.29410	15.60	0.0000
ERROR	124	81.79978	0.65968		
TOTAL	129	346.26024			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	-4.9071	(-7.6498 , -2.1643)	0.6996	(0.1747 , 1.2246)
LEACHATE	-2.2330	(-4.7164 , 0.2504)	0.3765	(-0.1015 , 0.8545)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 151. STUDY 36/SW 846 METHOD 8270/SEMI-VOLATILES/GC-MS

EFFECT OF WATER TYPE ON P-DIMETHYLAMINOAZOBENZENE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.04824

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.0628	-0.0106
LEACHATE	0.0101	0.0023

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	387.26153	387.26153		
REG(WATER/REAGENT)	4	0.02172	0.00543	0.13	0.9715
ERROR	141	5.91894	0.04198		
TOTAL	146	393.20219			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.0628	(-0.2428 , 0.3683)	-0.0106	(-0.0760 , 0.0548)
LEACHATE	0.0101	(-0.3055 , 0.3256)	0.0023	(-0.0651 , 0.0697)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 152. STUDY 36,SW 846 METHOD 8270,SEMI-VOLATILES,GC-MS

EFFECT OF WATER TYPE ON 3,3 -DIMETHYLBENZIDINE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.18378

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-2.9385	0.4519
LEACHATE	-0.2124	0.0297

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	189.27810	189.27810		
REG(WATER/REAGENT)	4	17.28470	4.32117	28.90	0.0000
ERROR	131	19.58495	0.14950		
TOTAL	136	226.14775			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	-2.9385	(-4.1219 , -1.7552)	0.4519	(0.2209 , 0.6828)
LEACHATE	-0.2124	(-1.4267 , 1.0019)	0.0297	(-0.2056 , 0.2651)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 153. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON 4,4 -METHYLENE BIS (2-CHLOROAN ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.09541

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-0.7759	0.1110
LEACHATE	0.1739	-0.0355

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	126.69083	126.69083		
REG(WATER/REAGENT)	4	1.70577	0.42644	15.34	0.0000
ERROR	127	3.52998	0.02780		
TOTAL	132	131.92659			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	-0.7759	(-1.3013 , -0.2505)	0.1110	(0.0092 , 0.2129)
LEACHATE	0.1739	(-0.3588 , 0.7066)	-0.0355	(-0.1396 , 0.0675)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 154. STUDY 36,SW 846 METHOD 8270,SEMI-VOLATILES,GC-MS

EFFECT OF WATER TYPE ON 3,3 -DIMETHOXYBENZIDINE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.47103

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-1.4388	0.2080
LEACHATE	0.6221	-0.0965

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	234.78384	234.78384		
REG(WATER/REAGENT)	4	8.42065	2.10516	14.77	0.0000
ERROR	131	18.66899	0.14251		
TOTAL	136	261.87348			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	-1.4388	(-2.6273 , -0.2502)	0.2080	(-0.0236 , 0.4396)
LEACHATE	0.6221	(-0.5325 , 1.7766)	-0.0965	(-0.3216 , 0.1285)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 155. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON 2-METHYLNAPHTHALENE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 0.92526

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.0171	0.0052
LEACHATE	-0.0826	0.0187

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	330.14748	330.14748		
REG(WATER/REAGENT)	4	0.07593	0.01898	0.69	0.6032
ERROR	152	4.21096	0.02770		
TOTAL	157	334.43437			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.0171	(-0.2329 , 0.2671)	0.0052	(-0.0497 , 0.0590)
LEACHATE	-0.0826	(-0.3169 , 0.1518)	0.0187	(-0.0317 , 0.0691)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 156. STUDY 36,SW 846 METHOD 8270,SEMI-VOLATILES,GC-MS

EFFECT OF WATER TYPE ON METHYL METHANE SULFONATE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.01527

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-0.1232	0.0125
LEACHATE	-0.0312	0.0216

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	341.20391	341.20391		
REG(WATER/REAGENT)	4	0.41201	0.10300	2.43	0.0513
ERROR	127	5.39216	0.04246		
TOTAL	132	347.00808			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	-0.1232	(-0.4527 , 0.2063)	0.0125	(-0.0578 , 0.0829)
LEACHATE	-0.0312	(-0.3608 , 0.2983)	0.0216	(-0.0487 , 0.0920)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 157. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON N-NITROSOMORPHOLINE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.05899

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.5791	-0.0795
LEACHATE	0.2542	-0.0437

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	334.53262	334.53262		
REG(WATER/REAGENT)	4	1.57480	0.39370	7.07	0.0000
ERROR	128	7.12361	0.05565		
TOTAL	133	343.23103			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.5791	(0.2007 , 0.9576)	-0.0795	(-0.1604 , 0.0013)
LEACHATE	0.2542	(-0.1193 , 0.6277)	-0.0437	(-0.1236 , 0.0362)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 158. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON 4-METHYLPHENOL ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.05479

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	1.4477	-0.2459
LEACHATE	0.2346	-0.0406

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	212.10375	212.10375		
REG(WATER/REAGENT)	4	4.90719	1.22680	23.54	0.0000
ERROR	137	7.13856	0.05211		
TOTAL	142	224.14950			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	1.4477	(0.9912 , 1.9041)	-0.2459	(-0.3393 , -0.1524)
LEACHATE	0.2346	(-0.2148 , 0.6840)	-0.0406	(-0.1327 , 0.0515)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 159. STUDY 36,SW 846 METHOD 8270,SEMI-VOLATILES,GC-MS

EFFECT OF WATER TYPE ON 2,6-DICHLOROPHENOL ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 0.97875

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.1808	-0.0340
LEACHATE	-0.1265	0.0255

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	242.05024	242.05024		
REG(WATER/REAGENT)	4	0.16503	0.04125	1.86	0.1195
ERROR	151	3.34009	0.02212		
TOTAL	156	245.55533			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL		SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL	
GROUND WATER	0.1808	(-0.1060 ,	0.4676)	-0.0340	(-0.0929 ,	0.0248)
LEACHATE	-0.1265	(-0.3964 ,	0.1435)	0.0255	(-0.0301 ,	0.0810)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 160. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON 1,2,4,5-TETRACHLOROBENZENE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 0.93655

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-0.1257	0.0129
LEACHATE	-0.1137	0.0117

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	286.98870	286.98870		
REG(WATER/REAGENT)	4	0.13659	0.03415	1.17	0.3252
ERROR	127	3.69226	0.02907		
TOTAL	132	290.81755			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	-0.1257	(-0.3994 , 0.1481)	0.0129	(-0.0456 , 0.0714)
LEACHATE	-0.1137	(-0.3874 , 0.1601)	0.0117	(-0.0469 , 0.0702)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 161. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON ISOSAFROLE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 0.99723

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.0264	-0.0042
LEACHATE	-0.1590	0.0280

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	340.78145	340.78145		
REG(WATER/REAGENT)	4	0.11088	0.02772	1.05	0.3828
ERROR	134	3.52997	0.02634		
TOTAL	139	344.42231			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.0264	(-0.2248 , 0.2776)	-0.0042	(-0.0579 , 0.0496)
LEACHATE	-0.1590	(-0.4118 , 0.0938)	0.0280	(-0.0258 , 0.0817)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 162. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON DIBENZOFURAN ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 0.91656

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-0.0534	-0.0053
LEACHATE	-0.1301	0.0190

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	317.79953	317.79953		
REG(WATER/REAGENT)	4	0.19951	0.04988	1.97	0.1026
ERROR	148	3.75416	0.02537		
TOTAL	153	321.75320			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	-0.0534	(-0.2863 , 0.1795)	-0.0053	(-0.0552 , 0.0446)
LEACHATE	-0.1301	(-0.3655 , 0.1054)	0.0190	(-0.0312 , 0.0693)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 163. STUDY 36/SW 846 METHOD 8270/SEMI-VOLATILES/GC-MS

EFFECT OF WATER TYPE ON N-NITROSODIPHENYLAMINE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 0.93755

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.0914	-0.0025
LEACHATE	-0.2178	0.0463

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	330.69163	330.69163		
REG(WATER/REAGENT)	4	0.42370	0.10592	4.70	0.0013
ERROR	146	3.28962	0.02253		
TOTAL	151	334.40495			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.0914	(-0.1354 , 0.3182)	-0.0025	(-0.0510 , 0.0460)
LEACHATE	-0.2173	(-0.4372 , 0.0016)	0.0463	(-0.0007 , 0.0933)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 164. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON PHENACETIN ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.07254

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.2301	-0.0600
LEACHATE	0.1058	-0.0083

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	118.89732	118.89732		
REG(WATER/REAGENT)	4	0.48365	0.12091	3.41	0.0109
ERROR	132	4.67928	0.03545		
TOTAL	137	124.06024			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.2301	(-0.3406 , 0.8007)	-0.0600	(-0.1701 , 0.0501)
LEACHATE	0.1058	(-0.4650 , 0.6766)	-0.0083	(-0.1183 , 0.1018)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 165. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON PRONAMIDE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.04852

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.2832	-0.0711
LEACHATE	0.1252	-0.0286

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	261.52718	261.52718		
REG(WATER/REAGENT)	4	0.29893	0.07473	2.48	0.0461
ERROR	150	4.51227	0.03008		
TOTAL	155	266.33838			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.2832	(-0.0436 , 0.6100)	-0.0711	(-0.1379 , -0.0043)
LEACHATE	0.1252	(-0.1942 , 0.4447)	-0.0286	(-0.0943 , 0.0370)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 166. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON 2-ACETYLAMINOFLUORENE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.13868

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.3263	-0.0367
LEACHATE	0.1700	-0.0154

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	148.12901	148.12901		
REG(WATER/REAGENT)	4	0.54622	0.13656	2.39	0.0538
ERROR	145	8.29520	0.05721		
TOTAL	150	156.97043			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.3263	(-0.3810 , 1.0336)	-0.0367	(-0.1732 , 0.0999)
LEACHATE	0.1700	(-0.5081 , 0.8482)	-0.0154	(-0.1466 , 0.1159)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTEPCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 167. STUDY 36,SW 846 METHOD 8270,SEMI-VOLATILES,GC-MS

EFFECT OF WATER TYPE ON TRIS(2,3-DIBROMOPROPYL) PHOSPH ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.81909

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	2.3954	-0.5683
LEACHATE	2.3730	-0.3838

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	187.96097	187.96097		
REG(WATER/REAGENT)	4	9.17145	2.29286	3.40	0.0117
ERROR	109	73.57793	0.67503		
TOTAL	114	270.71035			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	2.8954	(0.0194 , 5.7714)	-0.5683	(-1.1191 , -0.0174)
LEACHATE	2.3730	(-0.4940 , 5.2400)	-0.3838	(-0.9328 , 0.1652)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 168. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON BENZYL ALCOHOL ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.06828

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.6541	-0.1078
LEACHATE	-0.0531	0.0198

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	243.05489	243.05489		
REG(WATER/REAGENT)	4	1.14771	0.28693	5.47	0.0004
ERROR	130	6.82107	0.05247		
TOTAL	135	251.02367			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.6541	(0.1864 , 1.1218)	-0.1078	(-0.2041 , -0.0114)
LEACHATE	-0.0531	(-0.4937 , 0.3875)	0.0198	(-0.0712 , 0.1108)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 169. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON DIHYDROSAFROLE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 0.94880

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.1031	-0.0218
LEACHATE	-0.0420	0.0131

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	319.83795	319.83795		
REG(WATER/REAGENT)	4	0.07608	0.01902	0.50	0.7390
ERROR	144	5.52691	0.03838		
TOTAL	149	325.44094			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.1031	(-0.2117 , 0.4179)	-0.0218	(-0.0884 , 0.0449)
LEACHATE	-0.0420	(-0.3261 , 0.2422)	0.0131	(-0.0478 , 0.0741)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 170. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON 1,3-DINITROBENZENE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.08291

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.4653	-0.0982
LEACHATE	-0.0198	0.0165

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	124.86655	124.86655		
REG(WATER/REAGENT)	4	0.53034	0.13271	3.59	0.0081
ERROR	139	5.13663	0.03695		
TOTAL	144	130.53402			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL		SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL	
GROUND WATER	0.4653	(-0.1281 ,	1.0587)	-0.0982	(-0.2122 ,	0.0159)
LEACHATE	-0.0198	(-0.5796 ,	0.5399)	0.0165	(-0.0917 ,	0.1247)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 171. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON CHLOROBENZILATE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.10607

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-0.3476	0.0514
LEACHATE	-0.3874	0.0034

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	347.75264	347.75264		
REG(WATER/REAGENT)	4	2.75967	0.68992	2.17	0.0766
ERROR	110	34.90753	0.31734		
TOTAL	115	385.41984			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	-0.3476	(-1.3073 , 0.6121)	0.0514	(-0.1507 , 0.2536)
LEACHATE	-0.3874	(-1.3617 , 0.5869)	0.0034	(-0.2048 , 0.2115)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 172. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON KEPONE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.11450

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-1.2264	0.0946
LEACHATE	-0.1335	0.0232

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	287.27280	287.27280		
REG(WATER/REAGENT)	4	19.35098	4.33774	39.16	0.0000
ERROR	132	16.30752	0.12354		
TOTAL	137	322.93130			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	-1.2264	(-1.9177 , -0.5352)	0.0946	(-0.0463 , 0.2354)
LEACHATE	-0.1335	(-0.8443 , 0.5772)	0.0232	(-0.1228 , 0.1692)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 173. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON 2-METHYLPHENOL ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.03952

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.6608	-0.1125
LEACHATE	-0.0482	-0.0045

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	228.74847	228.74847		
REG(WATER/REAGENT)	4	1.39313	0.34828	10.23	0.0000
ERROR	133	4.52594	0.03403		
TOTAL	138	234.66754			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL		SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL	
GROUND WATER	0.6608	(0.2933 ,	1.0283)	-0.1125	(-0.1881 ,	-0.0369)
LEACHATE	-0.0482	(-0.4013 ,	0.3050)	-0.0045	(-0.0774 ,	0.0684)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 174. STUDY 3a, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON ACETOPHENONE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 0.99797

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.2749	-0.0538
LEACHATE	-0.0086	-0.0072

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	376.18614	376.18614		
REG(WATER/REAGENT)	4	0.39438	0.09860	2.53	0.0429
ERROR	151	5.88685	0.03899		
TOTAL	156	382.46737			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.2749	(0.0022 , 0.5477)	-0.0538	(-0.1126 , 0.0050)
LEACHATE	-0.0086	(-0.2987 , 0.2816)	-0.0072	(-0.0694 , 0.0552)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 175. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON N-NITROSOPIPERIDINE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.02084

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.5259	-0.0993
LEACHATE	-0.0036	-0.0189

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	319.97272	319.97272		
REG(WATER/REAGENT)	4	1.29725	0.32431	11.16	0.0000
ERROR	127	3.68961	0.02905		
TOTAL	132	324.95958			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.5259	(0.2598 , 0.7920)	-0.0993	(-0.1568 , -0.0418)
LEACHATE	-0.0036	(-0.2682 , 0.2610)	-0.0189	(-0.0764 , 0.0386)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 176. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON HEXACHLOROPROPENE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.08636

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-0.3141	0.0582
LEACHATE	-0.0717	-0.0037

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	425.33075	425.33075		
REG(WATER/REAGENT)	4	0.45062	0.11265	1.07	0.3747
ERROR	133	14.02269	0.10543		
TOTAL	138	439.80405			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	-0.3141	(-0.8050 , 0.1768)	0.0582	(-0.0468 , 0.1633)
LEACHATE	-0.0717	(-0.5642 , 0.4207)	-0.0037	(-0.1096 , 0.1023)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 177. STUDY 36,SW 846 METHOD 8270,SEMI-VOLATILES,GC-MS

EFFECT OF WATER TYPE ON SAFROLE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 0.99746

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.1896	-0.0470
LEACHATE	0.1719	-0.0414

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	250.55559	250.55559		
REG(WATER/REAGENT)	4	0.14849	0.03712	1.51	0.2015
ERROR	159	3.90667	0.02457		
TOTAL	164	254.61075			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL		SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL	
GROUND WATER	0.1896	(-0.0990 ,	0.4783)	-0.0470	(-0.1084 ,	0.0123)
LEACHATE	0.1719	(-0.1088 ,	0.4526)	-0.0414	(-0.0991 ,	0.0164)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 178. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON 2,4,5-TRICHLOROPHENOL ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.08957

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.5301	-0.0952
LEACHATE	0.3319	-0.0684

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	116.38814	116.38814		
REG(WATER/REAGENT)	4	0.26206	0.06552	3.75	0.0063
ERROR	134	2.34192	0.01748		
TOTAL	139	118.99205			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.5301	(0.1179 , 0.9422)	-0.0952	(-0.1747 , -0.0157)
LEACHATE	0.3319	(-0.0656 , 0.7293)	-0.0684	(-0.1452 , 0.0083)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 179. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON 1,4-DINITROBENZENE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.10549

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.3194	-0.0671
LEACHATE	0.1372	-0.0296

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	116.30302	116.30302		
REG(WATER/REAGENT)	4	0.04300	0.02091	1.30	0.2740
ERROR	123	1.97965	0.01609		
TOTAL	129	118.36633			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL		SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL	
GROUND WATER	0.3194	(-0.0869 ,	0.7257)	-0.0671	(-0.1456 ,	0.0116)
LEACHATE	0.1372	(-0.2551 ,	0.5295)	-0.0296	(-0.1054 ,	0.0461)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 180. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON PENTACHLOROBENZENE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 0.98502

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-0.0568	0.0054
LEACHATE	-0.0092	-0.0139

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	380.51161	380.51161		
REG(WATER/REAGENT)	4	0.15637	0.03909	1.30	0.2741
ERROR	151	4.55413	0.03016		
TOTAL	156	385.22211			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	-0.0568	(-0.3040 , 0.1905)	0.0054	(-0.0478 , 0.0585)
LEACHATE	-0.0092	(-0.2564 , 0.2381)	-0.0139	(-0.0670 , 0.0392)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 181. STUDY 36,SW 846 METHOD 8270,SEMI-VOLATILES,GC-MS

EFFECT OF WATER TYPE ON 2,3,4,6-TETRACHLOROPHENOL ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.07895

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.0048	-0.0109
LEACHATE	0.2254	-0.0551

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	116.35668	116.35668		
REG(WATER/REAGENT)	4	0.13630	0.03407	1.29	0.2768
ERROR	129	3.40351	0.02638		
TOTAL	134	119.89649			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.0048	(-0.4995 , 0.5091)	-0.0109	(-0.1085 , 0.0867)
LEACHATE	0.2254	(-0.2789 , 0.7297)	-0.0551	(-0.1528 , 0.0425)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 182. STUDY 36/SW 846 METHOD 8270/SEMI-VOLATILES/GC-MS

EFFECT OF WATER TYPE ON DIPHENYLAMINE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.02332

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.2847	-0.0620
LEACHATE	0.1862	-0.0417

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	326.58678	326.58678		
REG(WATER/REAGENT)	4	0.20558	0.05139	1.89	0.1166
ERROR	130	3.54128	0.02724		
TOTAL	135	330.33364			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL		SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL	
GROUND WATER	0.2847	(0.0175 ,	0.5518)	-0.0620	(-0.1196 ,	-0.0044)
LEACHATE	0.1862	(-0.0756 ,	0.4480)	-0.0417	(-0.0983 ,	0.0149)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 183. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON PENTACHLORONITROBENZENE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.05927

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.1298	-0.0370
LEACHATE	0.3201	-0.0648

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	105.59044	105.59044		
REG(WATER/REAGENT)	4	0.15910	0.03978	1.88	0.1172
ERROR	125	2.63632	0.02111		
TOTAL	130	108.38787			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.1298	(-0.3347 , 0.5944)	-0.0370	(-0.1268 , 0.0528)
LEACHATE	0.3201	(-0.1444 , 0.7846)	-0.0648	(-0.1546 , 0.0251)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 184. STUDY 36,SW 846 METHOD 8270,SEMI-VOLATILES,GC-MS

EFFECT OF WATER TYPE ON 2-SEC-BUTYL- 4,6-DINITROPHENOL ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.23147

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.3327	-0.0618
LEACHATE	-0.0916	0.0267

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	142.60508	142.60508		
REG(WATER/REAGENT)	4	0.16829	0.04207	0.76	0.5519
ERROR	117	6.45754	0.05519		
TOTAL	122	149.23091			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.3327	(-0.4477 , 1.1132)	-0.0618	(-0.2129 , 0.0893)
LEACHATE	-0.0916	(-0.8444 , 0.6613)	0.0267	(-0.1186 , 0.1720)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 185. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON 7,12-DIMETHYLBENZ(A)ANTHRACENE ANALYSIS

1

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.17613

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-0.6271	0.0533
LEACHATE	0.0697	-0.0040

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	271.49060	271.49060		
REG(WATER/REAGENT)	4	4.54310	1.13577	3.47	0.0100
ERROR	126	41.18485	0.32686		
TOTAL	131	317.21855			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	-0.6271	(-1.8357 , 0.5815)	0.0533	(-0.1912 , 0.2977)
LEACHATE	0.0697	(-1.1754 , 1.3148)	-0.0040	(-0.2518 , 0.2439)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 186. STUDY 36,SW 846 METHOD 8270,SEMI-VOLATILES,GC-MS

EFFECT OF WATER TYPE ON 3-METHYCHOLANTHRENE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.13360

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.2774	-0.0009
LEACHATE	-0.1162	0.0459

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	260.40684	260.40684		
REG(WATER/REAGENT)	4	1.55593	0.38896	1.33	0.2625
ERROR	120	35.07837	0.29232		
TOTAL	125	297.04104			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.2774	(-0.8828 , 1.4375)	-0.0009	(-0.2363 , 0.2345)
LEACHATE	-0.1162	(-1.2616 , 1.0291)	0.0459	(-0.1855 , 0.2774)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 187. STUDY 35, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON DIBENZO(A,E)PYRENE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.36326

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.0802	-0.0336
LEACHATE	-0.1623	0.0718

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	177.59709	177.59709		
REG(WATER/REAGENT)	4	2.27277	0.56819	1.20	0.3152
ERROR	121	57.38079	0.47422		
TOTAL	126	237.25066			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL		SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL	
GROUND WATER	0.0802	(-2.2600 ,	2.4263)	-0.0336	(-0.4814 ,	0.4143)
LEACHATE	-0.1623	(-2.3686 ,	2.0441)	0.0718	(-0.3549 ,	0.4985)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 188. STUDY 36,SW 846 METHOD 8270,SEMI-VOLATILES,GC-MS

EFFECT OF WATER TYPE ON ETHYL METHANE SULFONATE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 0.99721

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.1836	-0.0134
LEACHATE	0.0012	-0.0038

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	346.09649	346.09649		
REG(WATER/REAGENT)	4	0.59656	0.14664	7.19	0.0000
ERROR	134	2.73151	0.02038		
TOTAL	139	349.41456			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL		SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL	
GROUND WATER	0.1836	(-0.0253 ,	0.3925)	-0.0134	(-0.0583 ,	0.0314)
LEACHATE	0.0012	(-0.2231 ,	0.2255)	-0.0038	(-0.0517 ,	0.0442)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 189. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON 1,2-DIBROMO-3-CHLOROPROPANE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.25591

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-0.1169	0.0009
LEACHATE	0.0685	-0.0281

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	374.93282	374.93282		
REG(WATER/REAGENT)	4	0.38559	0.09640	1.17	0.3258
ERROR	144	11.84597	0.08226		
TOTAL	149	387.16428			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL		SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL	
GROUND WATER	-0.1169	(-0.6467 ,	0.4128)	0.0009	(-0.1082 ,	0.1101)
LEACHATE	0.0685	(-0.5110 ,	0.6481)	-0.0281	(-0.1463 ,	0.0901)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 190. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON 1,2-DINITROBENZENE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.06084

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.3181	-0.0747
LEACHATE	0.0495	-0.0198

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	224.02188	224.02188		
REG(WATER/REAGENT)	4	0.26372	0.06593	2.89	0.0249
ERROR	123	2.80307	0.02279		
TOTAL	128	227.08867			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.3181	(0.0147 , 0.6214)	-0.0747	(-0.1369 , -0.0125)
LEACHATE	0.0495	(-0.2637 , 0.3627)	-0.0198	(-0.0841 , 0.0446)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 191. STUDY 36,SW 846 METHOD 8270,SEMI-VOLATILES,GC-MS

EFFECT OF WATER TYPE ON 1,3,5-TRINITROBENZENE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.17966

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-0.6476	0.0892
LEACHATE	-0.1863	0.0017

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	131.92778	131.92778		
REG(WATER/REAGENT)	4	1.02731	0.25683	1.64	0.1701
ERROR	112	17.58209	0.15698		
TOTAL	117	150.53718			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	-0.6476	(-2.0241 , 0.7290)	0.0892	(-0.1777 , 0.3560)
LEACHATE	-0.1863	(-1.4531 , 1.0804)	0.0017	(-0.2433 , 0.2467)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 192. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON DIALLATE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 0.98792

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	-0.0349	0.0081
LEACHATE	0.0446	-0.0053

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	336.53259	336.53259		
REG(WATER/REAGENT)	4	0.02448	0.00612	0.31	0.8738
ERROR	132	2.64407	0.02003		
TOTAL	137	339.20115			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	-0.0349	(-0.2586 , 0.1888)	0.0081	(-0.0397 , 0.0559)
LEACHATE	0.0446	(-0.1793 , 0.2685)	-0.0053	(-0.0532 , 0.0425)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.

TABLE 193. STUDY 36, SW 846 METHOD 8270, SEMI-VOLATILES, GC-MS

EFFECT OF WATER TYPE ON 4-NITROQUINOLINE-N-OXIDE ANALYSIS

** POINT ESTIMATES **

REAGENT WATER SLOPE:GAMMA(1) = 1.49563

WATER	INTERCEPT(WATER-REAGENT)	SLOPE(WATER-REAGENT)
GROUND WATER	0.4896	-0.0969
LEACHATE	0.0826	-0.0170

** ANALYSIS OF VARIANCE **

SOURCE	DF	SUM OF SQUARES	MEAN SQUARE	F	PROB
REG(REAGENT)	1	237.65854	237.65854		
REG(WATER/REAGENT)	4	0.19234	0.04809	0.29	0.8820
ERROR	139	22.80014	0.16403		
TOTAL	144	260.65103			

** TABLE OF 95% CONFIDENCE INTERVALS FOR THE DIFFERENCES BETWEEN INTERCEPTS AND THE DIFFERENCES BETWEEN SLOPES **

WATER	INTERCEPT(WATER-REAGENT) ESTIMATE	INTERVAL	SLOPE(WATER-REAGENT) ESTIMATE	INTERVAL
GROUND WATER	0.4896	(-0.7217 , 1.7008)	-0.0969	(-0.3307 , 0.1369)
LEACHATE	0.0826	(-1.1084 , 1.2735)	-0.0170	(-0.2476 , 0.2135)

NOTE: IF ZERO IS CONTAINED WITHIN A GIVEN CONFIDENCE INTERVAL THEN THERE IS NO STATISTICAL SIGNIFICANCE BETWEEN REAGENT WATER AND THE CORRESPONDING WATER FOR THE ASSOCIATED PARAMETER(INTERCEPT/SLOPE).

THE SLOPE AND INTERCEPT ESTIMATES FROM THIS ANALYSIS ARE NOT THE SAME AS THOSE OBTAINED FROM THE PRECISION AND MEAN RECOVERY REGRESSIONS PERFORMED EARLIER.